FIG.1A

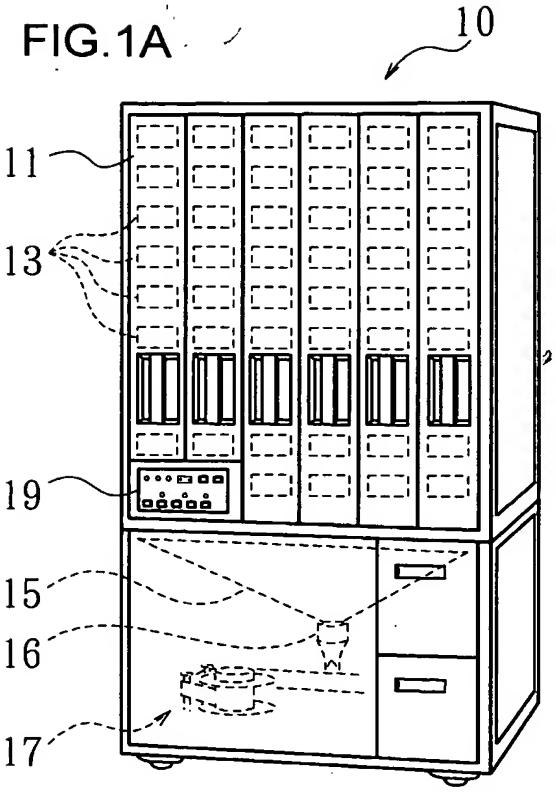

FIG.1B

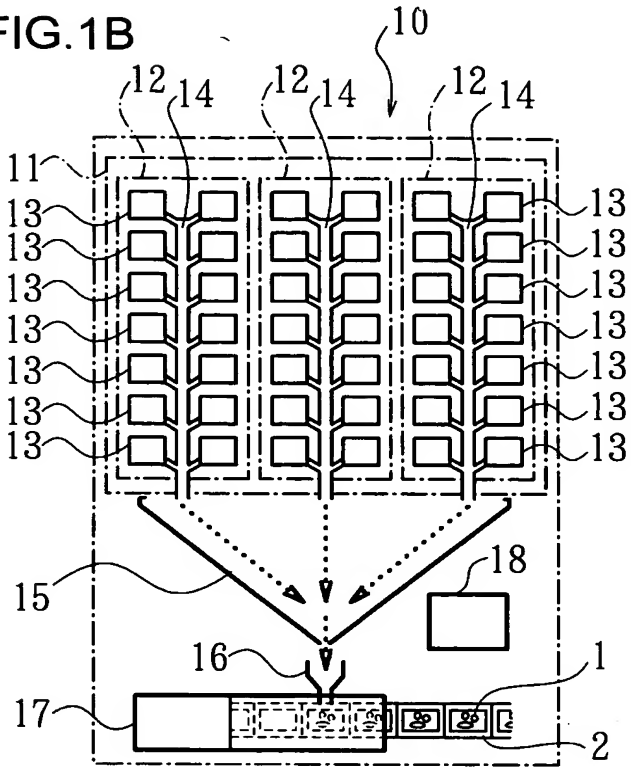

FIG.1C

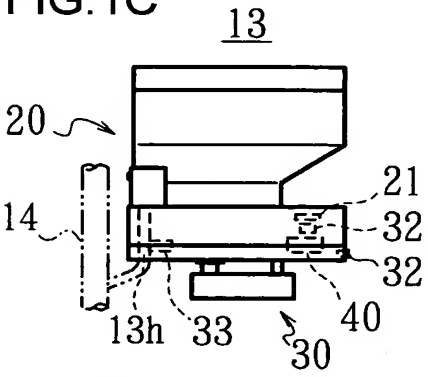

FIG.1D

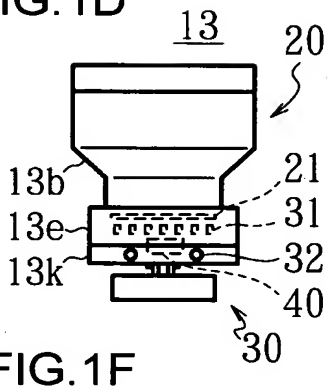

FIG.1E

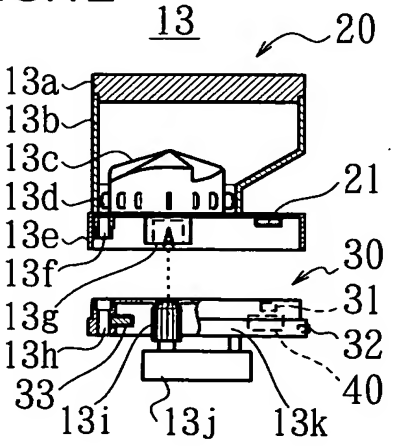

FIG.1F

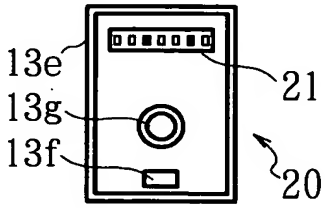

FIG.1G

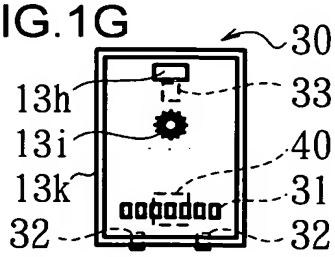

FIG.1H

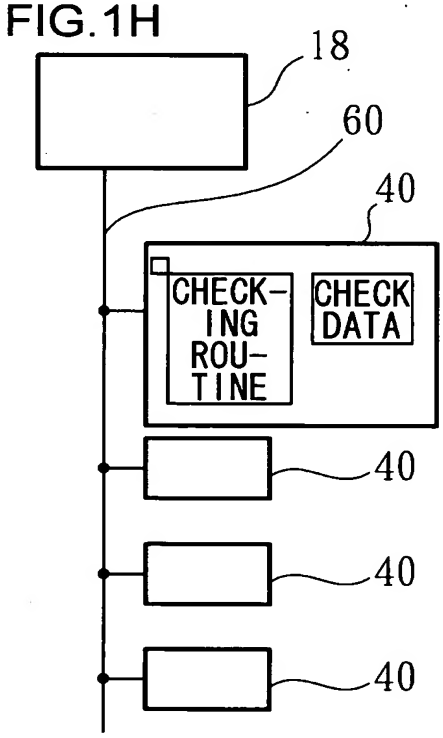

FIG.2

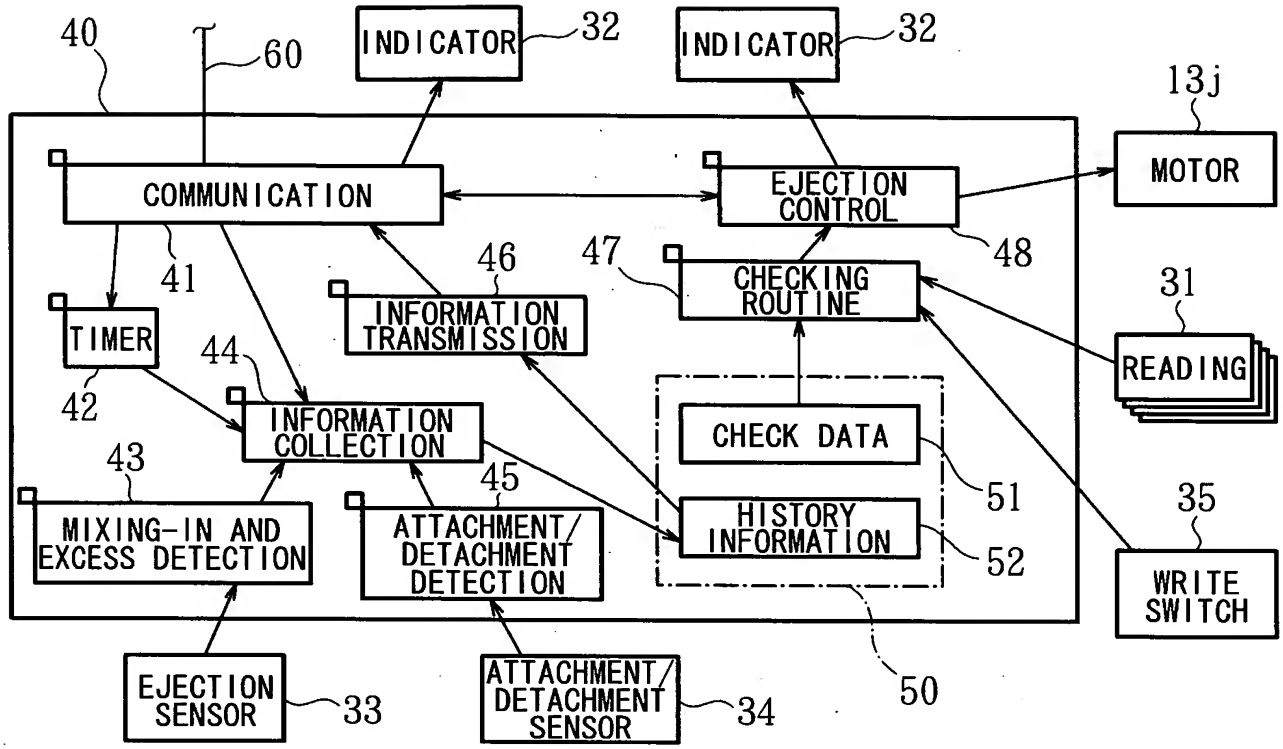
40
60
INDICATOR
32
INDICATOR
32
13j
MOTOR
COMMUNICATION
EJECTION CONTROL
48
41
46
47
CHECKING ROUTINE
31
TIMER
INFORMATION TRANSMISSION
READING
42
44
INFORMATION COLLECTION
CHECK DATA
51
43
45
HISTORY INFORMATION
52
35
MIXING-IN AND EXCESS DETECTION
ATTACHMENT/ DETACHMENT DETECTION
WRITE SWITCH
50
EJECTION SENSOR
33
ATTACHMENT/ DETACHMENT SENSOR
34

FIG.3A

FIRST DECISION TABLE

MIXING-IN	YES				NO			
EXCESS	YES		NO		YES		NO	
ATTACH-MENT/ DETACH-MENT	YES	–	YES	–	YES	–	YES	–
RANK	B	–	B	–	B	–	C	–

FIG.3B

SECOND DECISION TABLE

MIXING-IN	YES				NO			
EXCESS	YES		NO		YES		NO	
ATTACH-MENT/ DETACH-MENT	–	NO	–	NO	–	NO	–	NO
RANK	–	A	–	B	–	B	–	E

FIG.4A

DRUG DISPENSING HISTORY INFORMATION

TIME	MIXING-IN/ EXCESS	RANK
1234	MIXING-IN	A
2345	EXCESS	AA
3456	MIXING-IN	A
⋮	⋮	⋮

FIG.4B

ATTACHMENT/DETACHMENT HISTORY INFORMATION

TIME	CASSETTE ATTACHMENT/ DETACHMENT	RANK
1221	ATTACHMENT	E
2323	DETACHMENT	C
3210	ATTACHMENT	E
⋮	⋮	⋮

FIG.5A

FABRICATION HISTORY INFORMATION

TIME	PROCESS ID	PERSONNEL ID
0012	1	95
0333	2	42
0454	3	67
⋮	⋮	⋮

FIG.5B

SELECTION HISTORY INFORMATION

TIME	DOSAGE FORM	CAPSULE	COMPAT-IBILITY
0111	F		110
0123		○	NO
0135	R		125
⋮	⋮	⋮	⋮

FIG.5C

TABLET : TYPE F

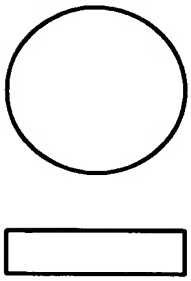

FIG.5D

TABLET : TYPE FR

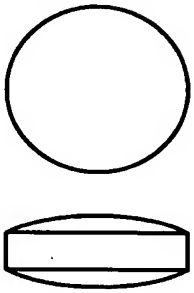

FIG.5E

TABLET : TYPE R

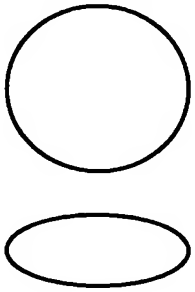

FIG.6

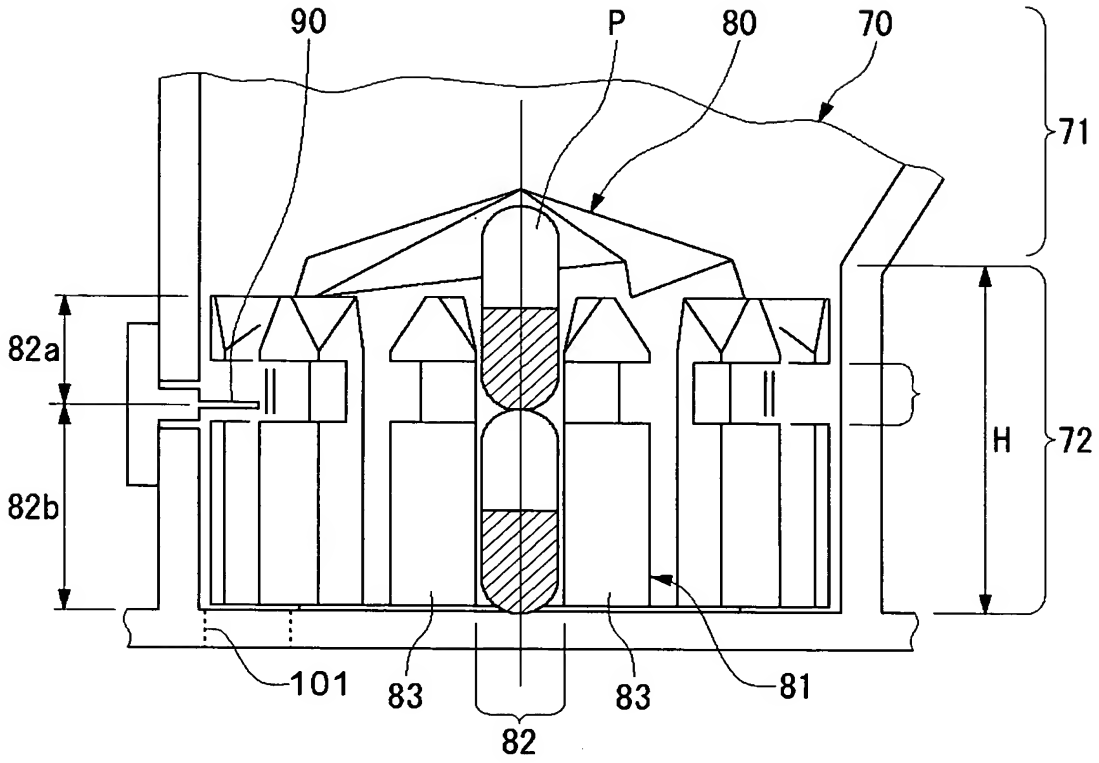

FIG.7A

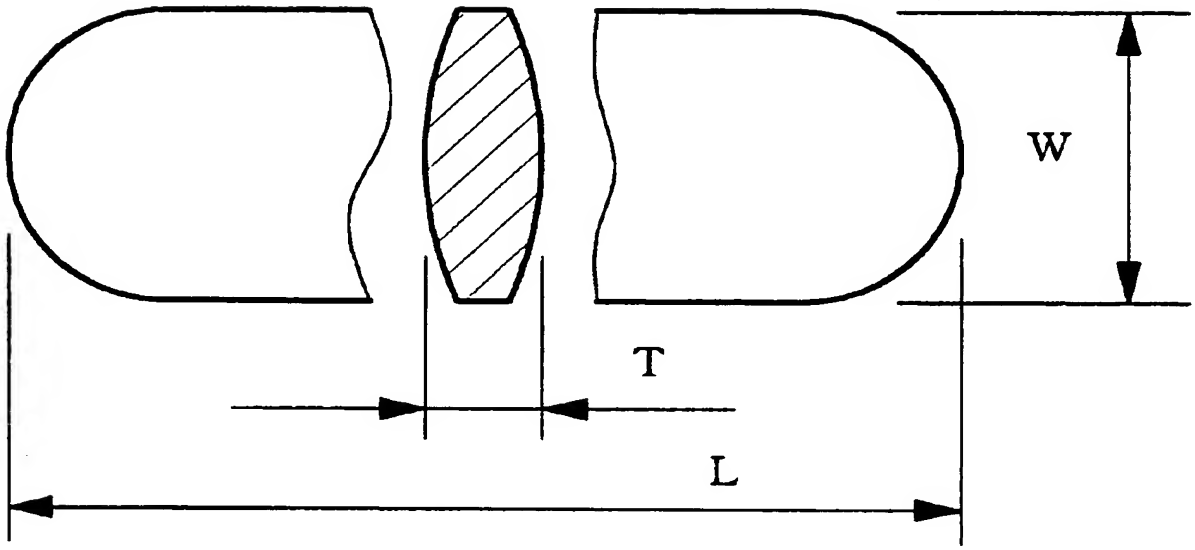

FIG.7B

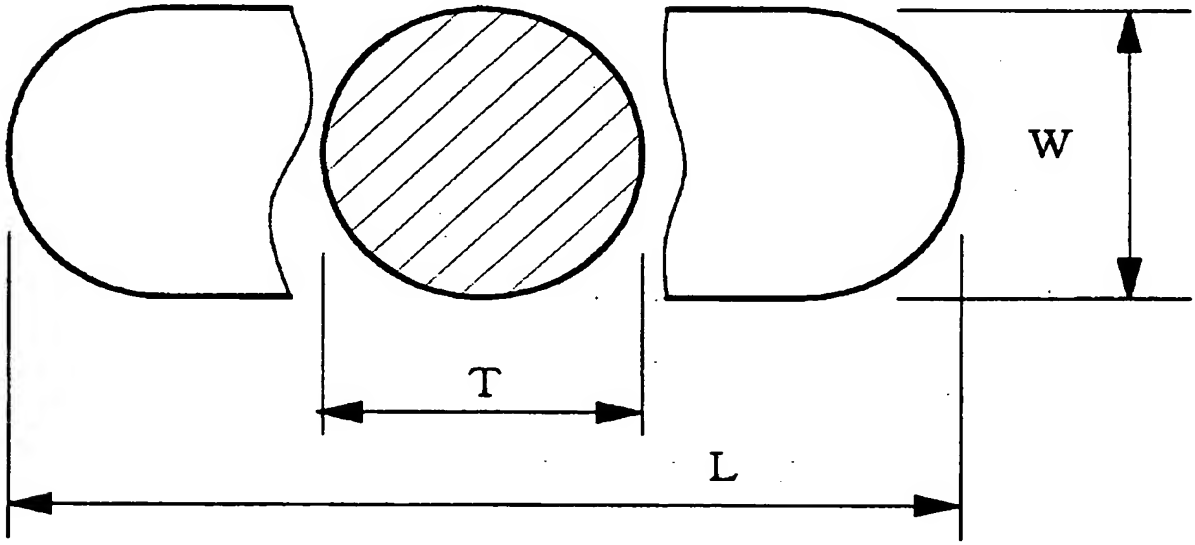

FIG.8

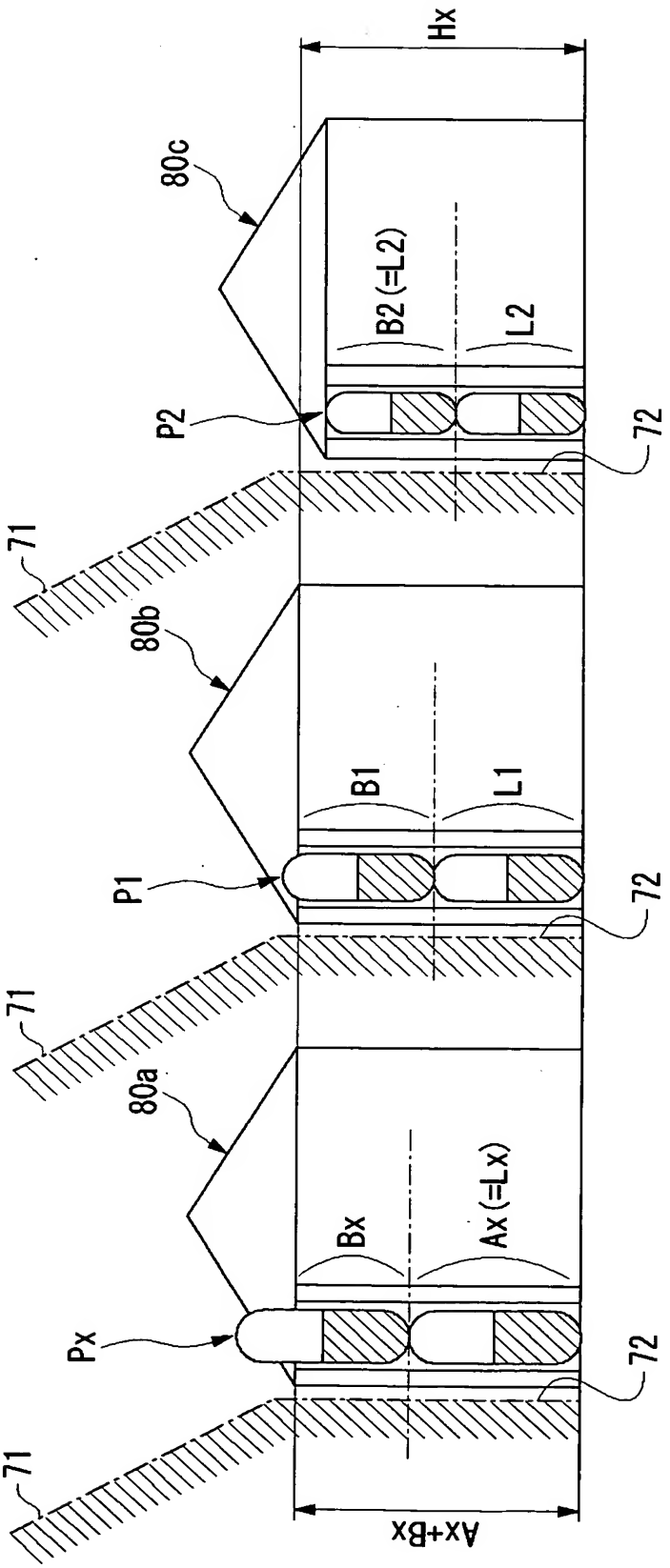

FIG.9

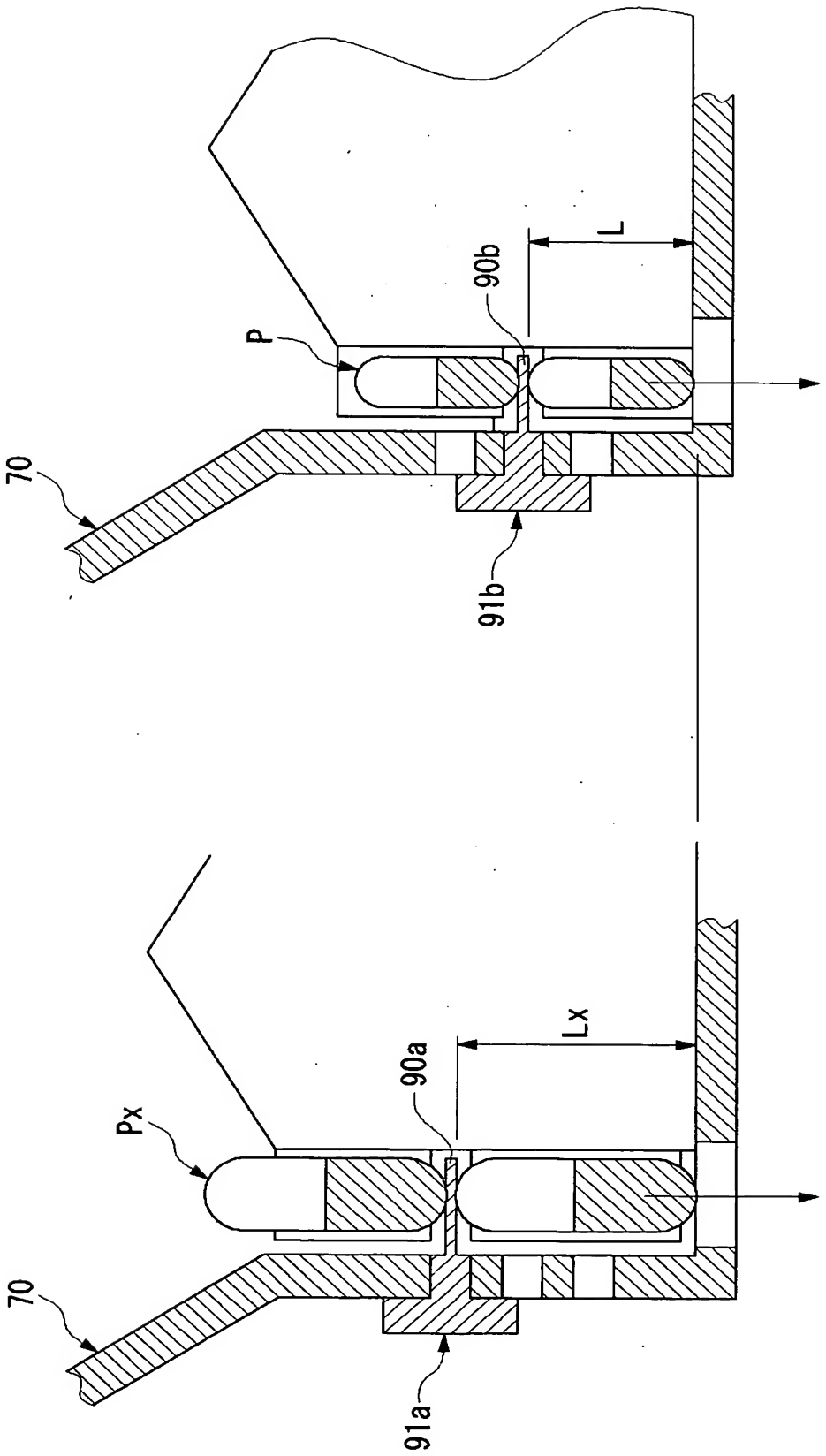

FIG.10A

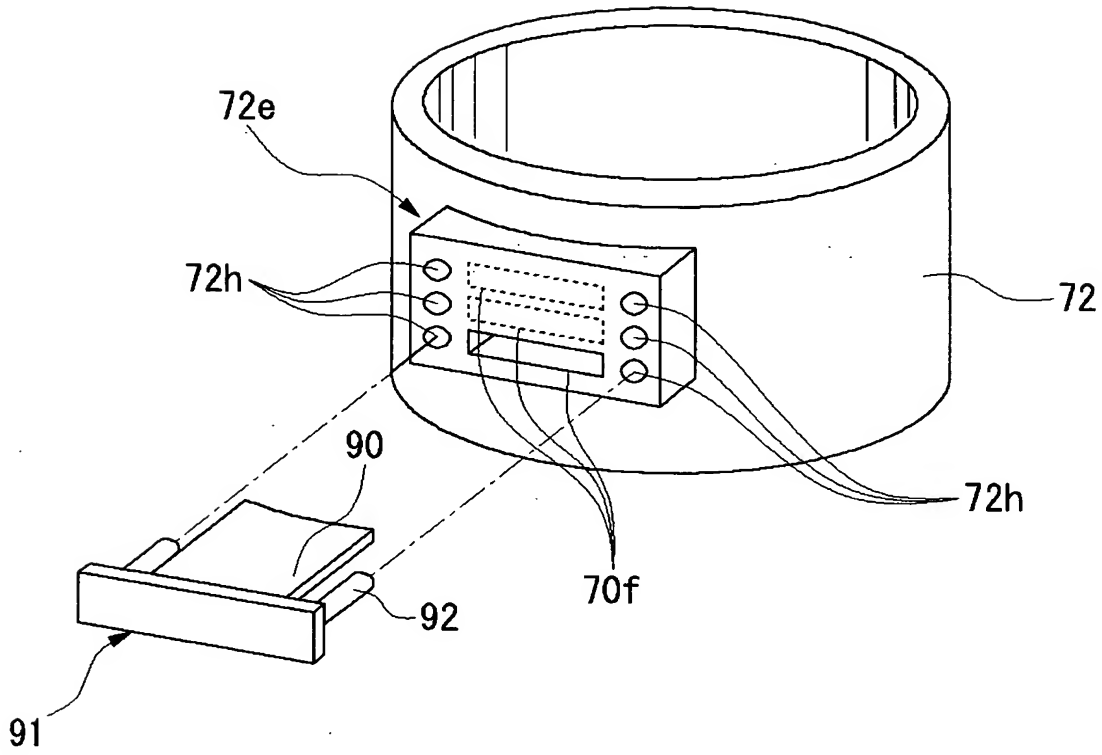

FIG.10B

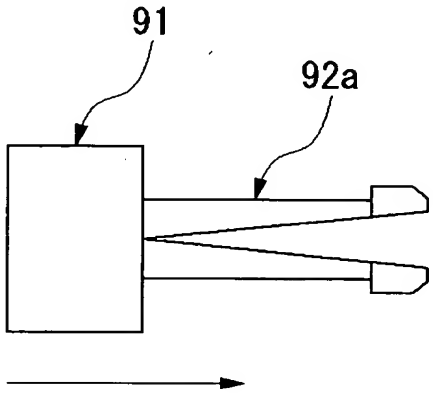

FIG.11

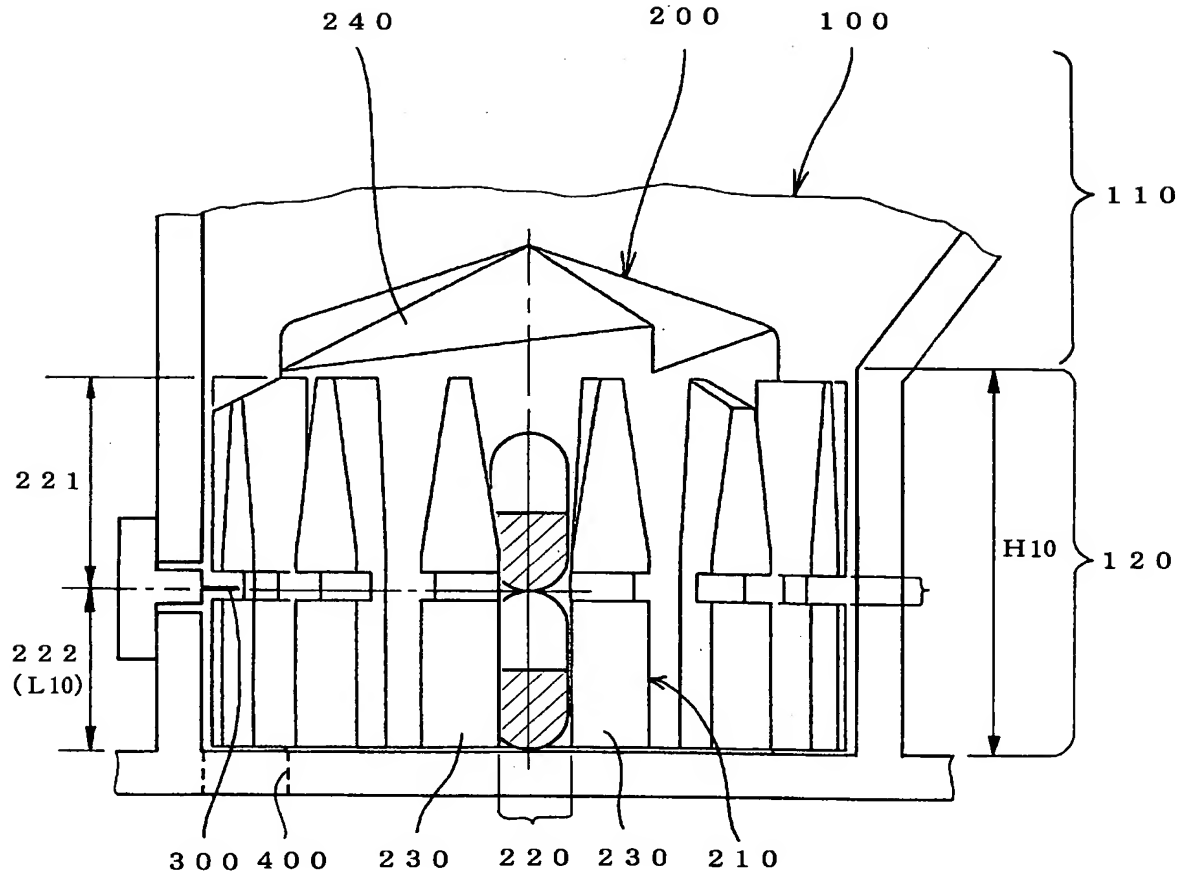

FIG.12

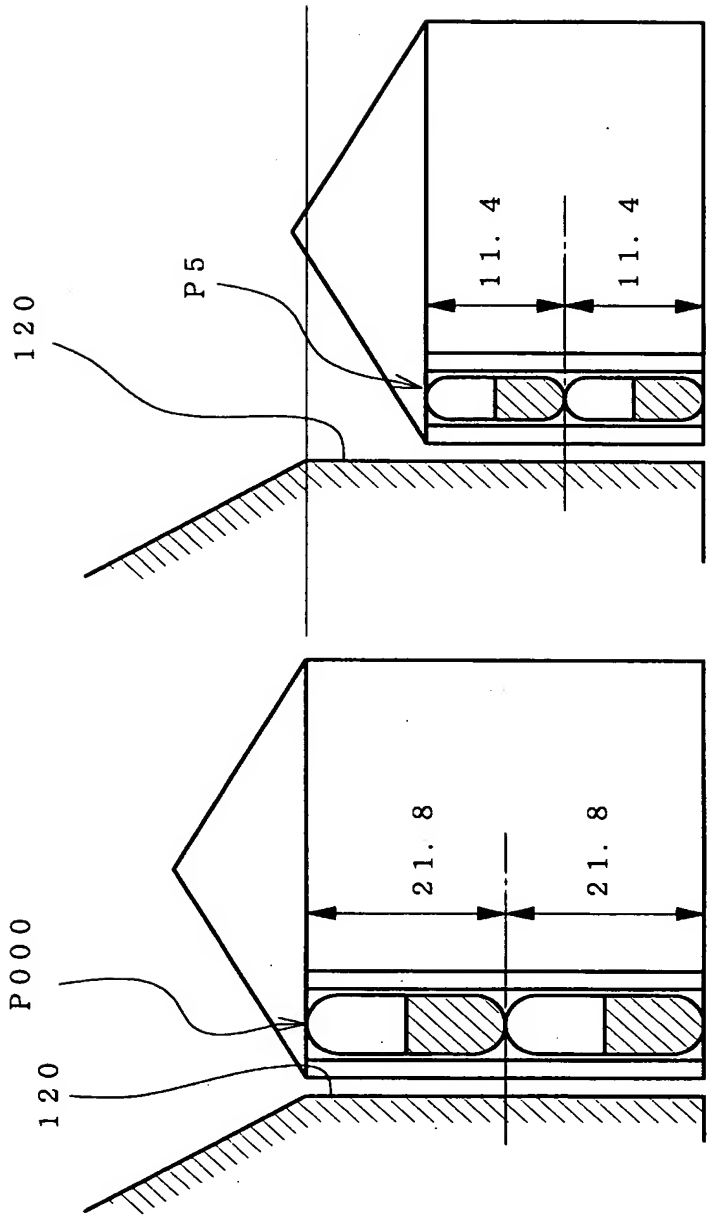

FIG.13A

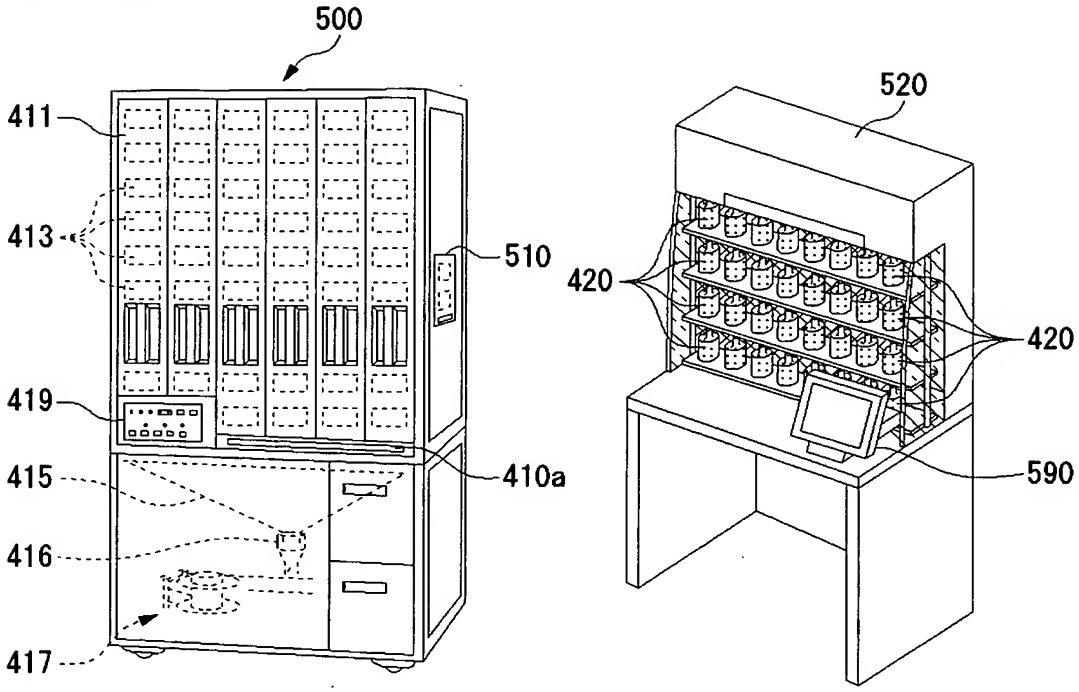

FIG.13B

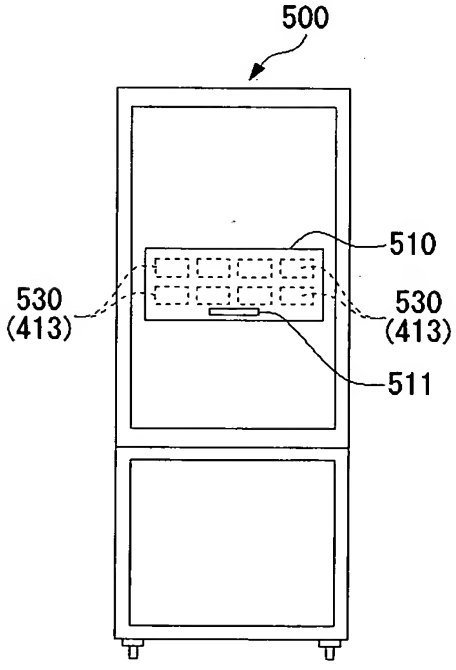

FIG.13C

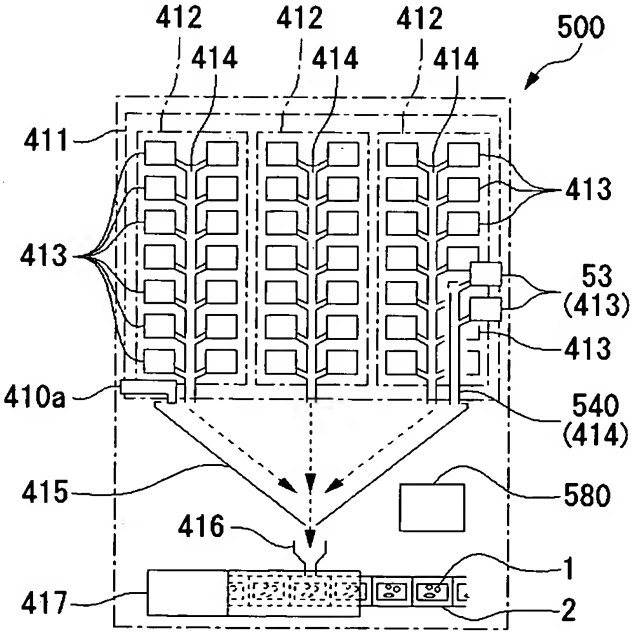

FIG.14A

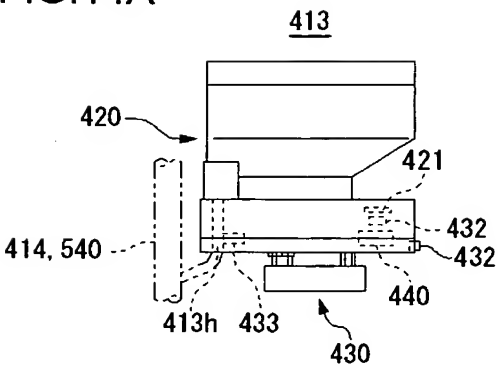

FIG.14B

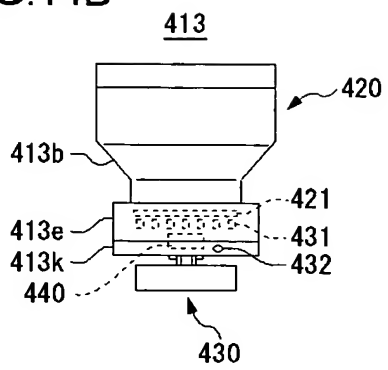

FIG.14C

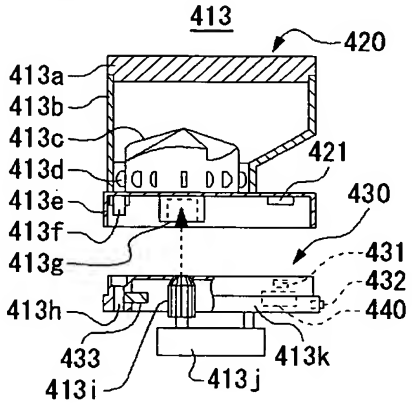

FIG.14D

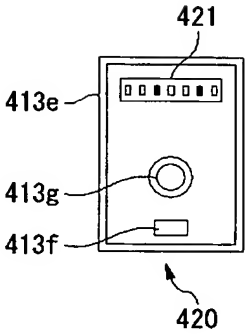

FIG.14E

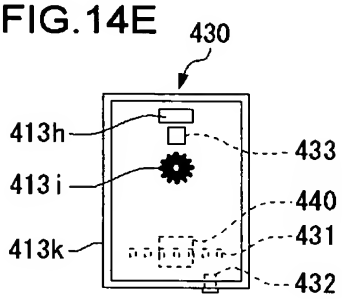

FIG.14F

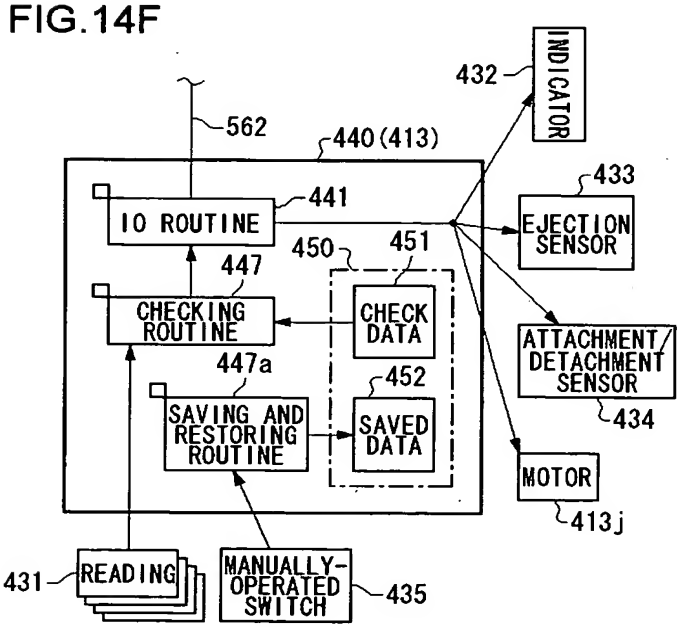

FIG.14G

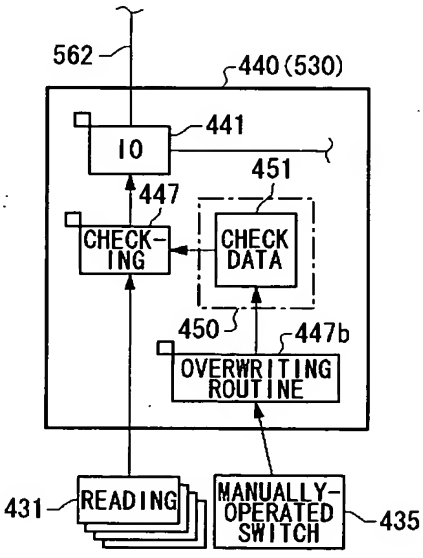

FIG.15

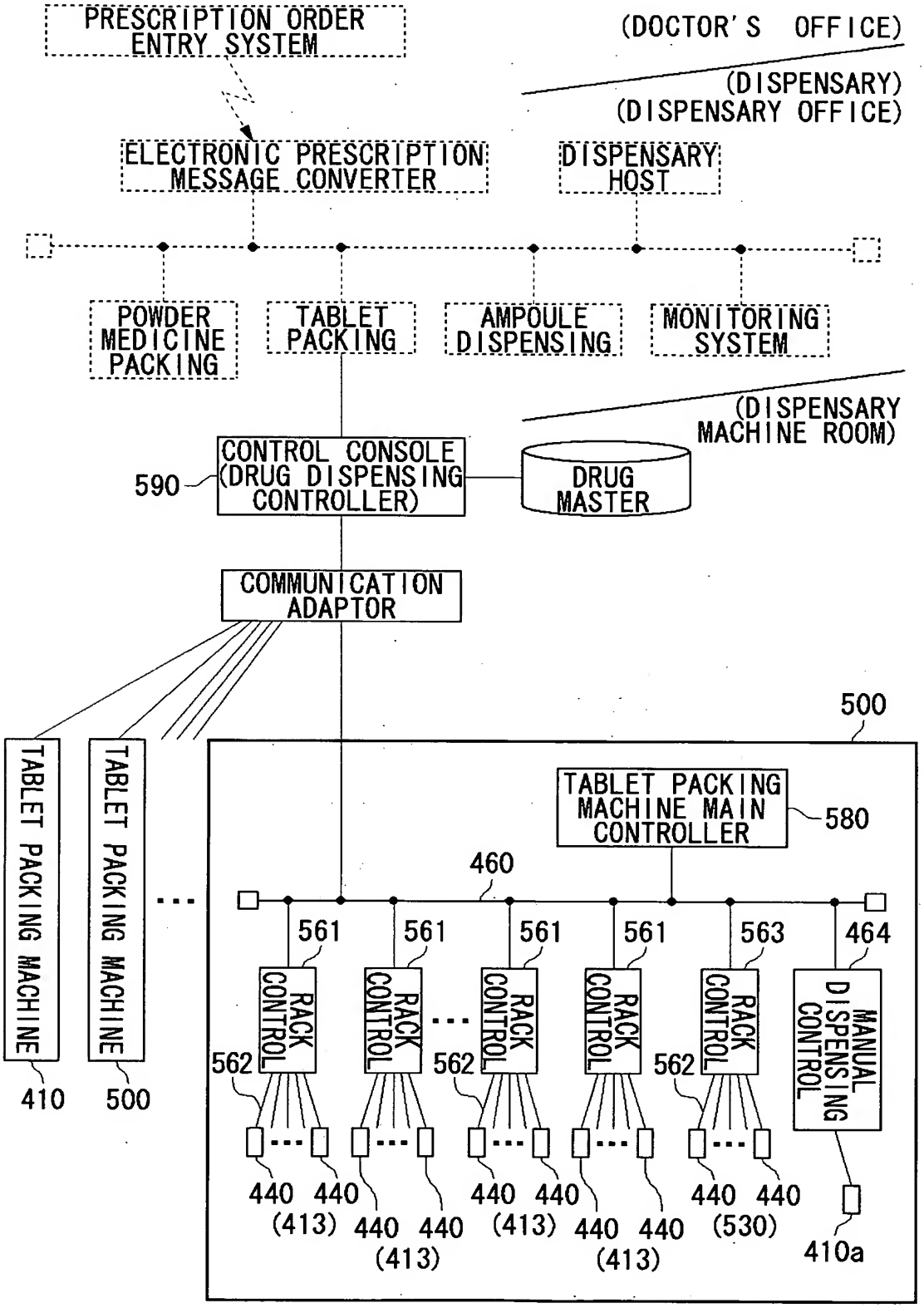
PRESCRIPTION ORDER ENTRY SYSTEM
(DOCTOR'S OFFICE)
(DISPENSARY)
(DISPENSARY OFFICE)
ELECTRONIC PRESCRIPTION MESSAGE CONVERTER
DISPENSARY HOST
POWDER MEDICINE PACKING
TABLET PACKING
AMPOULE DISPENSING
MONITORING SYSTEM
(DISPENSARY MACHINE ROOM)
590
CONTROL CONSOLE (DRUG DISPENSING CONTROLLER)
DRUG MASTER
COMMUNICATION ADAPTOR
500
TABLET PACKING MACHINE
TABLET PACKING MACHINE
410
500
TABLET PACKING MACHINE MAIN CONTROLLER
580
460
561
561
561
561
563
464
RACK CONTROL
RACK CONTROL
RACK CONTROL
RACK CONTROL
RACK CONTROL
MANUAL DISPENSING CONTROL
562
562
562
440
440
(413)
440
440
440
(413)
440
440
(413)
440
440
(530)
410a

FIG.16A

DRUG MASTER TABLE

DRUG CODE	DRUG INFORMATION					
		MACHINE 1 ID	CHECK DATA (CASSETTE IDENTIFICATION INFORMATION)	FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)	CASSETTE STATE	AC FLAG
			CHECK DATA (CASSETTE IDENTIFICATION INFORMATION)	FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)	CASSETTE STATE	AC FLAG
		⋮	⋮	⋮	⋮	⋮
		MACHINE N ID	CHECK DATA (CASSETTE IDENTIFICATION INFORMATION)	FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)	CASSETTE STATE	AC FLAG

FIG.16B

DRUG EJECTION INSTRUCTION (TO 413)

MACHINE n ID	FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)	TABLET COUNT ETC.	AC OFF

FIG.16C

DRUG EJECTION INSTRUCTION (TO 530)

MACHINE n ID	CHECK DATA (CASSETTE IDENTIFICATION INFORMATION)	TABLET COUNT ETC.	AC ON

FIG.17

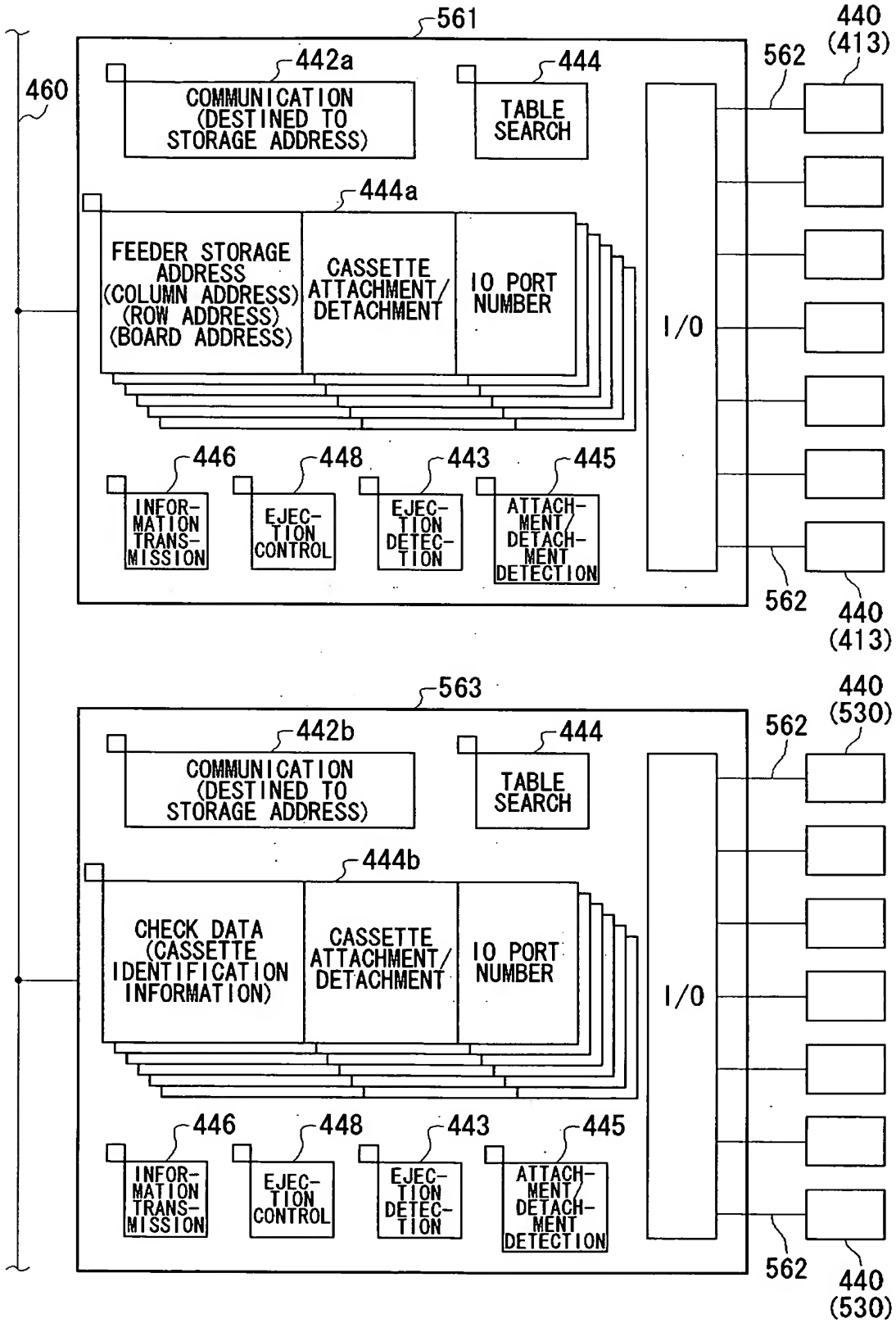
561
442a
COMMUNICATION (DESTINED TO STORAGE ADDRESS)
444
TABLE SEARCH
444a
FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)
CASSETTE ATTACHMENT/ DETACHMENT
IO PORT NUMBER
I/O
460
562
440 (413)
446
INFOR-MATION TRANS-MISSION
448
EJEC-TION CONTROL
443
EJEC-TION DETEC-TION
445
ATTACH-MENT/ DETACH-MENT DETECTION
562
440 (413)
563
442b
COMMUNICATION (DESTINED TO STORAGE ADDRESS)
444
TABLE SEARCH
444b
CHECK DATA (CASSETTE IDENTIFICATION INFORMATION)
CASSETTE ATTACHMENT/ DETACHMENT
IO PORT NUMBER
I/O
562
440 (530)
446
INFOR-MATION TRANS-MISSION
448
EJEC-TION CONTROL
443
EJEC-TION DETEC-TION
445
ATTACH-MENT/ DETACH-MENT DETECTION
562
440 (530)

FIG.18A

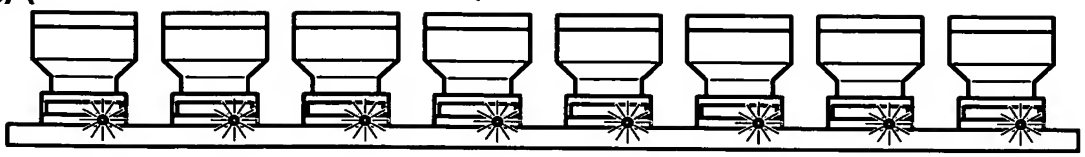

FIG.18B

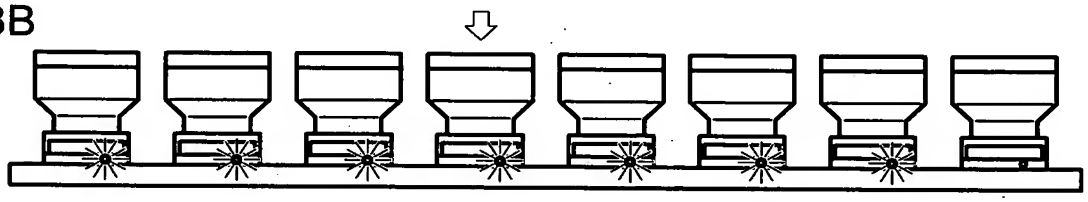

FIG.18C

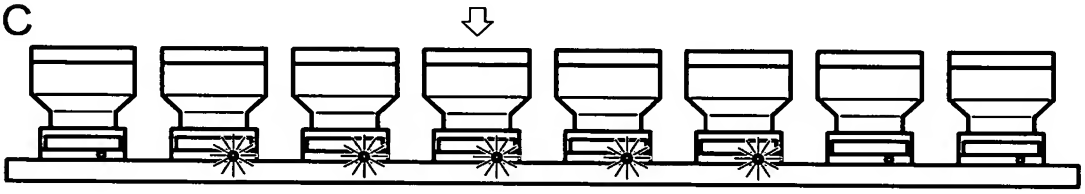

FIG.18D

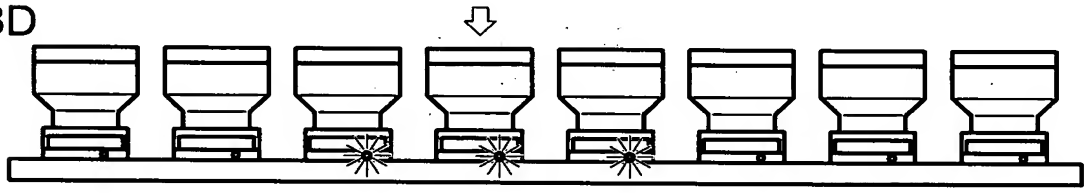

FIG.18E

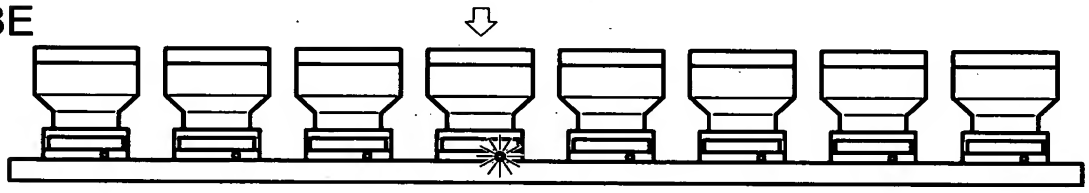

FIG.18F

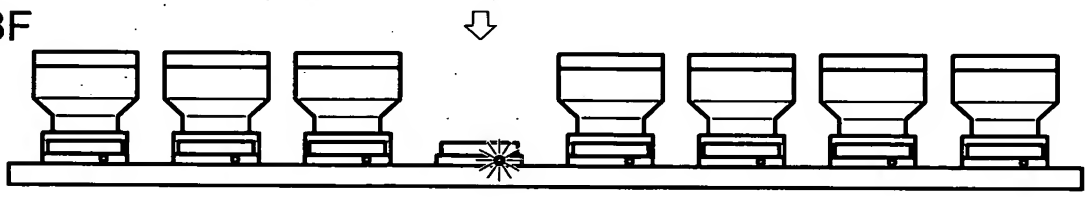

FIG.18G

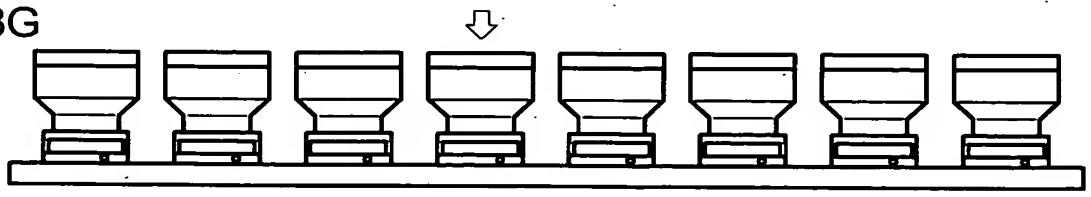

FIG.19

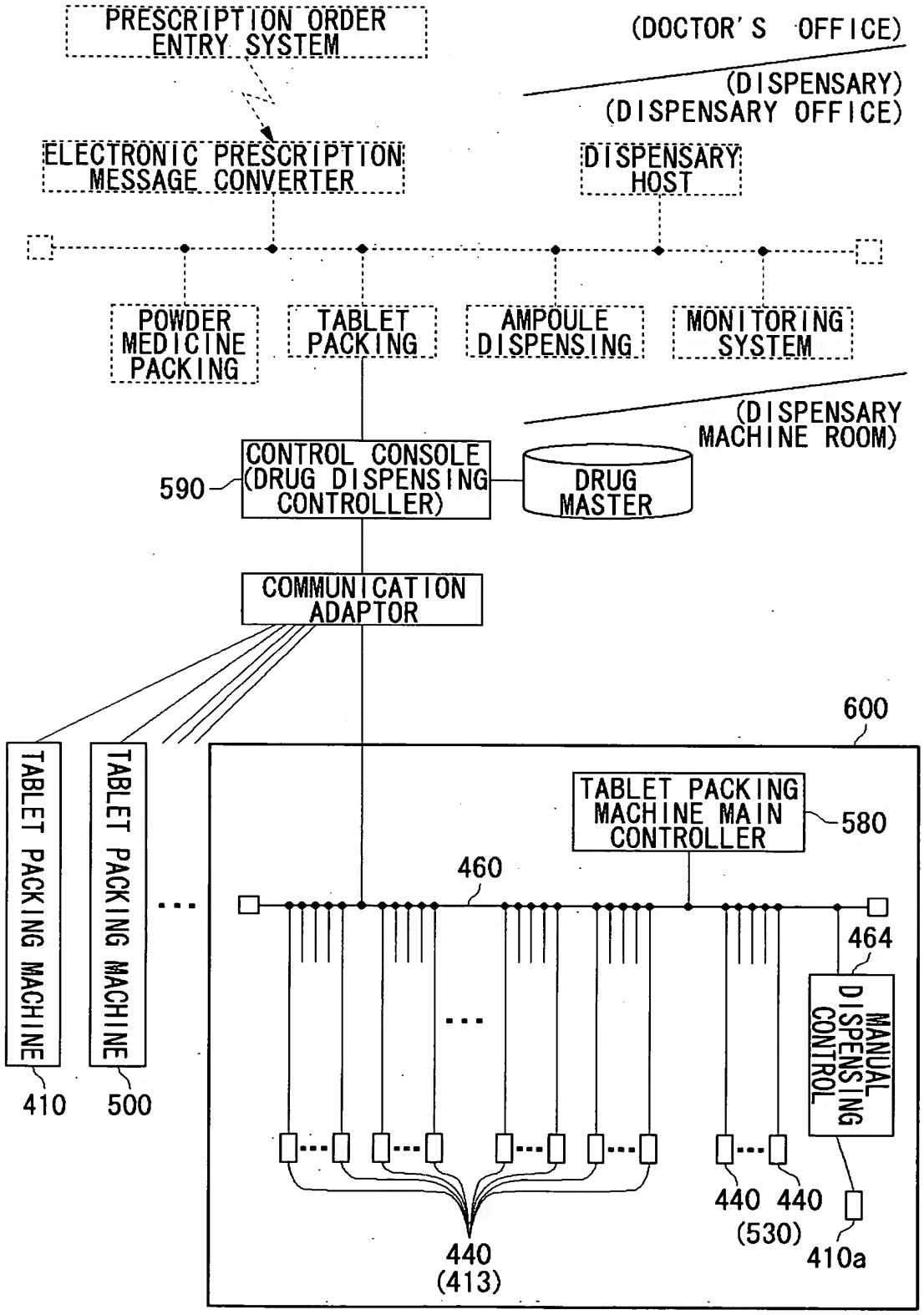
PRESCRIPTION ORDER ENTRY SYSTEM
(DOCTOR'S OFFICE)
(DISPENSARY)
(DISPENSARY OFFICE)
ELECTRONIC PRESCRIPTION MESSAGE CONVERTER
DISPENSARY HOST
POWDER MEDICINE PACKING
TABLET PACKING
AMPOULE DISPENSING
MONITORING SYSTEM
(DISPENSARY MACHINE ROOM)
590
CONTROL CONSOLE (DRUG DISPENSING CONTROLLER)
DRUG MASTER
COMMUNICATION ADAPTOR
600
TABLET PACKING MACHINE
TABLET PACKING MACHINE
410
500
TABLET PACKING MACHINE MAIN CONTROLLER
580
460
464
MANUAL DISPENSING CONTROL
440
(413)
440 440
(530)
410a

FIG.20A

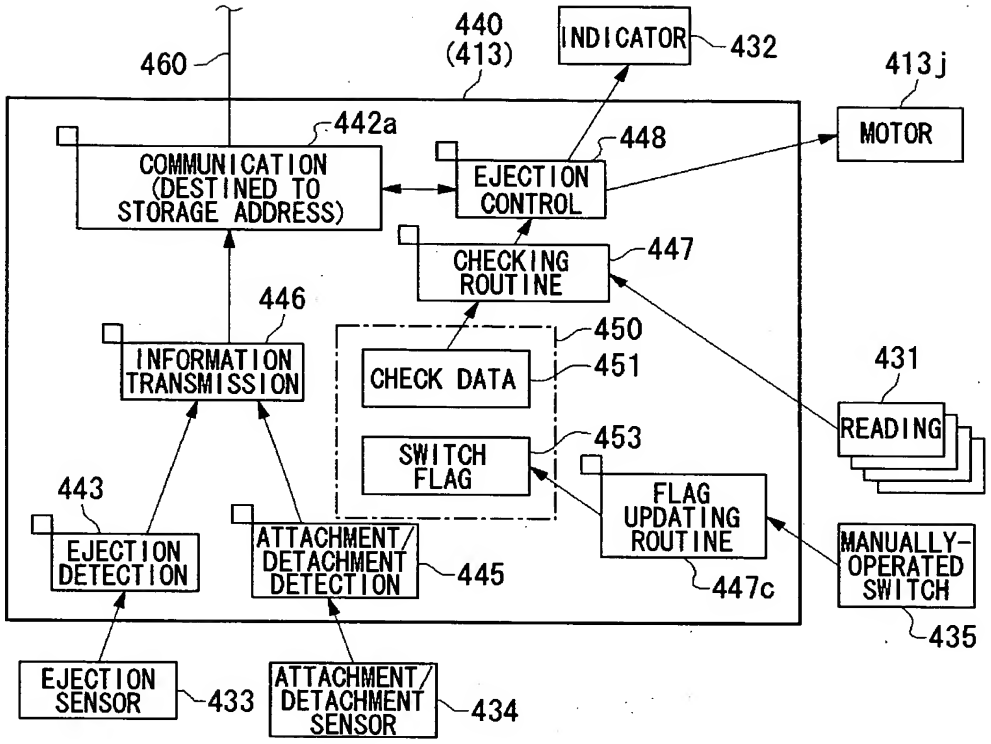

FIG.20B

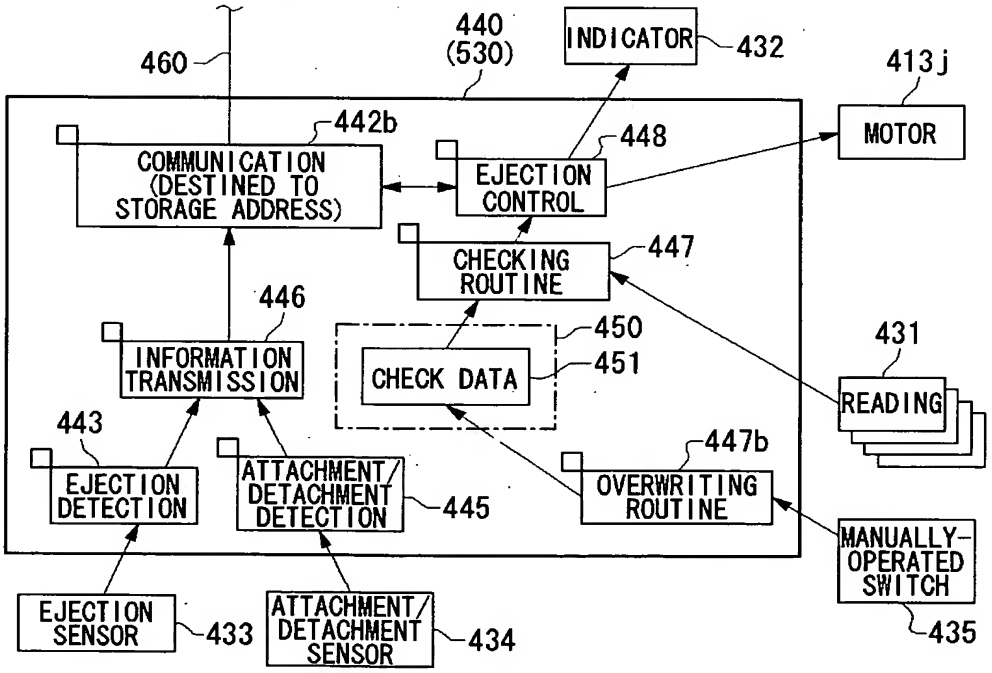

FIG.21A

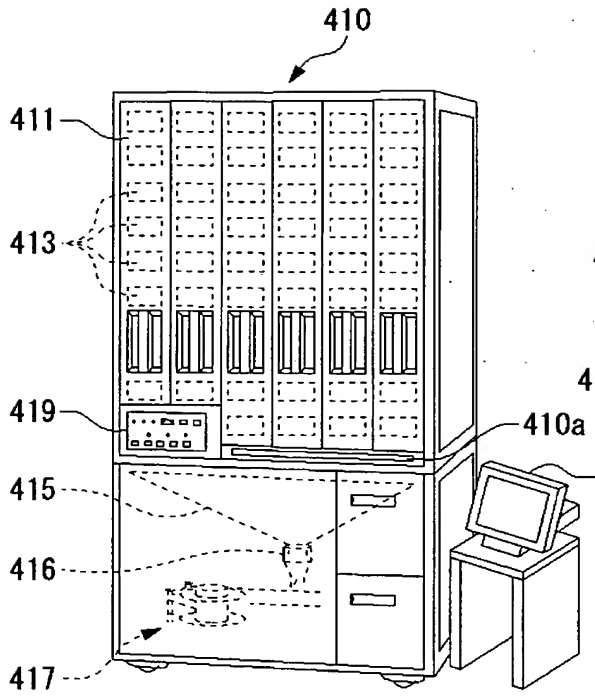

FIG.21B

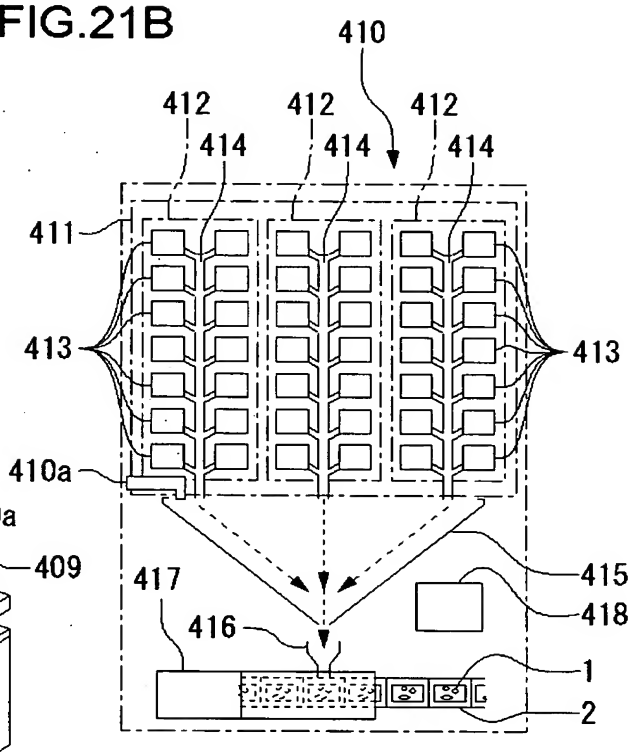

FIG.21C

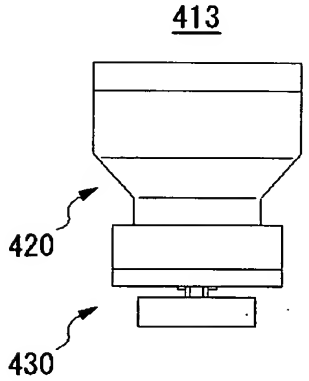

FIG.21D

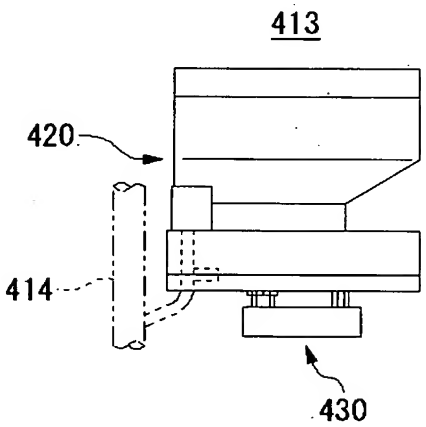

FIG.21E

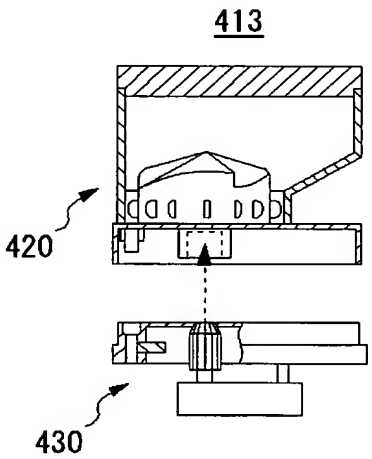

FIG.21F

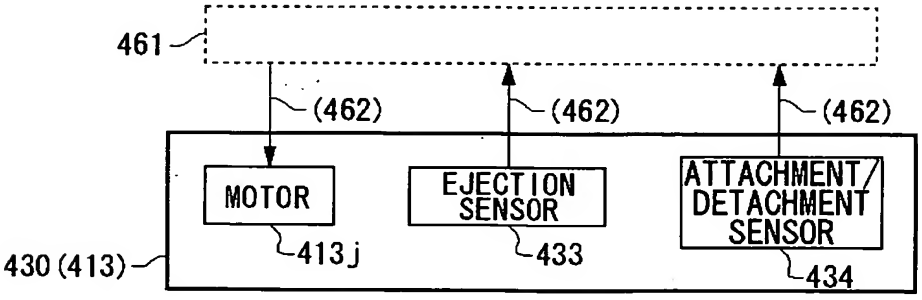

FIG.22

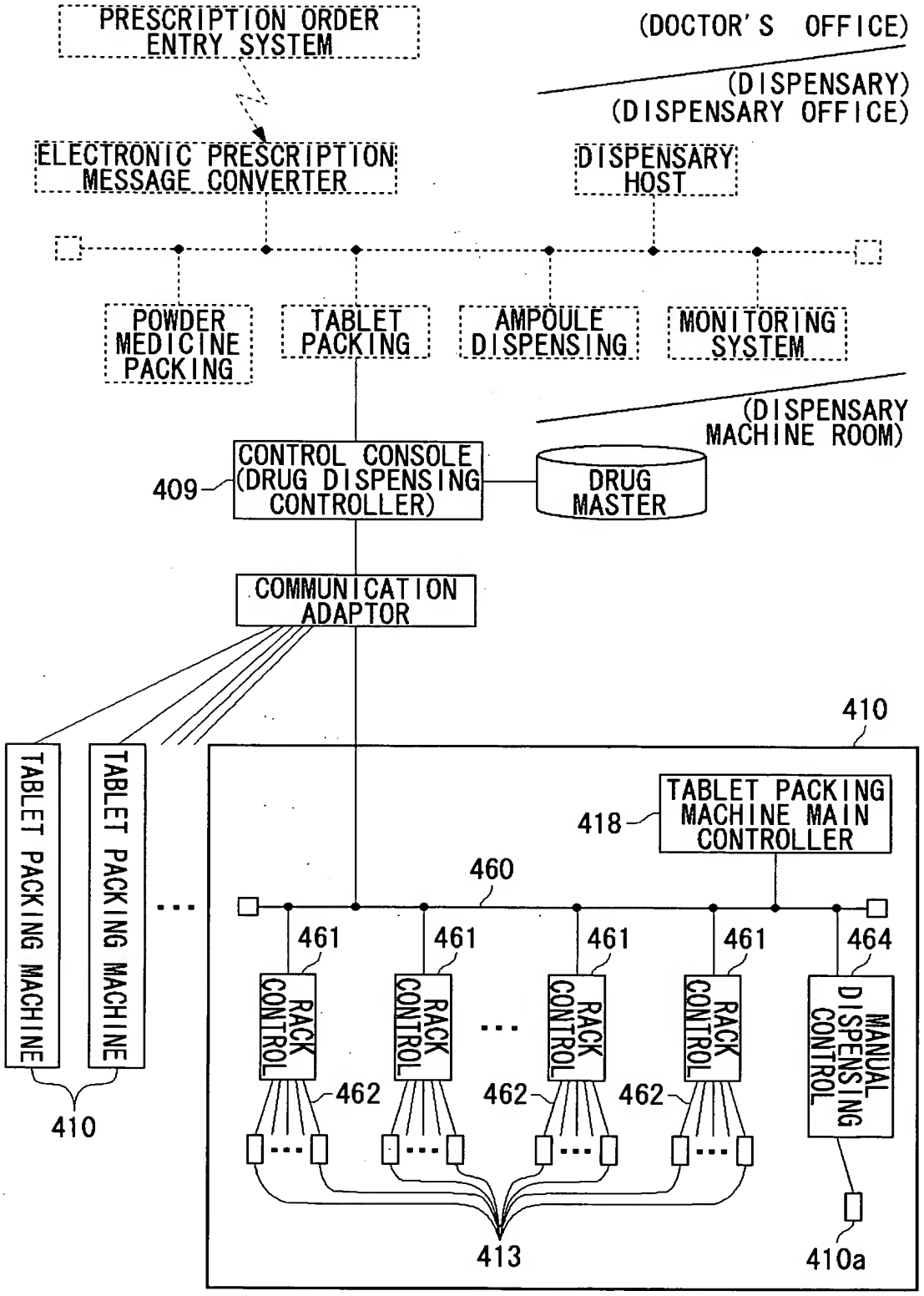
PRESCRIPTION ORDER ENTRY SYSTEM
(DOCTOR'S OFFICE)
(DISPENSARY)
(DISPENSARY OFFICE)
ELECTRONIC PRESCRIPTION MESSAGE CONVERTER
DISPENSARY HOST
POWDER MEDICINE PACKING
TABLET PACKING
AMPOULE DISPENSING
MONITORING SYSTEM
(DISPENSARY MACHINE ROOM)
409
CONTROL CONSOLE (DRUG DISPENSING CONTROLLER)
DRUG MASTER
COMMUNICATION ADAPTOR
410
TABLET PACKING MACHINE
TABLET PACKING MACHINE
410
418
TABLET PACKING MACHINE MAIN CONTROLLER
460
461
461
461
461
464
RACK CONTROL
RACK CONTROL
RACK CONTROL
RACK CONTROL
MANUAL DISPENSING CONTROL
462
462
462
413
410a

FIG.23A

DRUG MASTER TABLE

DRUG CODE	DRUG INFORMATION					
		MACHINE 1 ID	CHECK DATA (CASSETTE IDENTIFICATION INFORMATION)	FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)	CASSETTE STATE	
			CHECK DATA (CASSETTE IDENTIFICATION INFORMATION)	FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)	CASSETTE STATE	
		⋮	⋮	⋮	⋮	⋮
		MACHINE N ID	CHECK DATA (CASSETTE IDENTIFICATION INFORMATION)	FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)	CASSETTE STATE	

(FREE AREA FOR FUTURE EXPANSION)

FIG.23B

DRUG EJECTION INSTRUCTION

MACHINE n ID	FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)	TABLET COUNT ETC.

FIG.24A

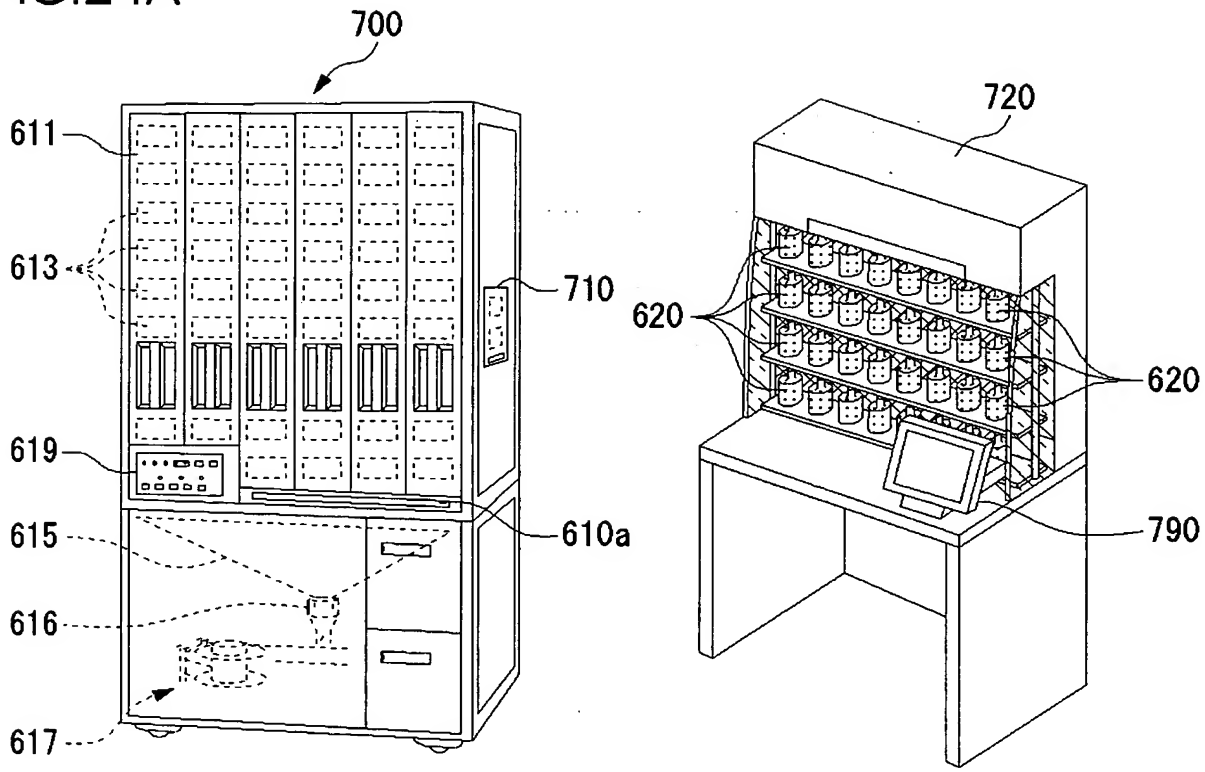

FIG.24B

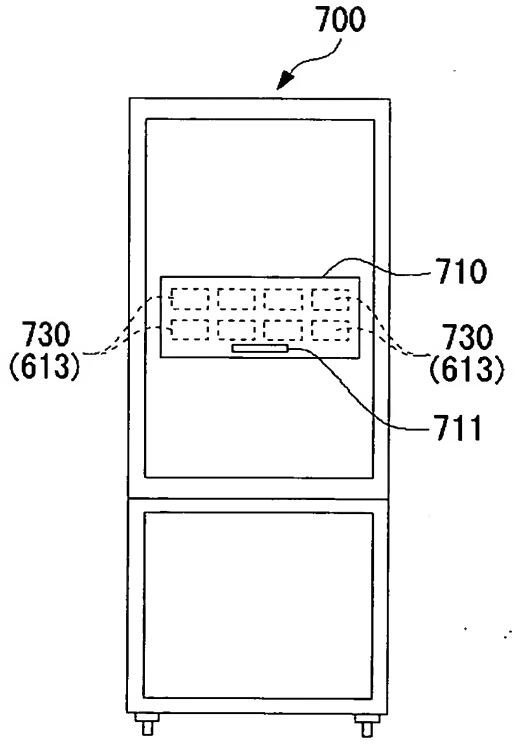

FIG.24C

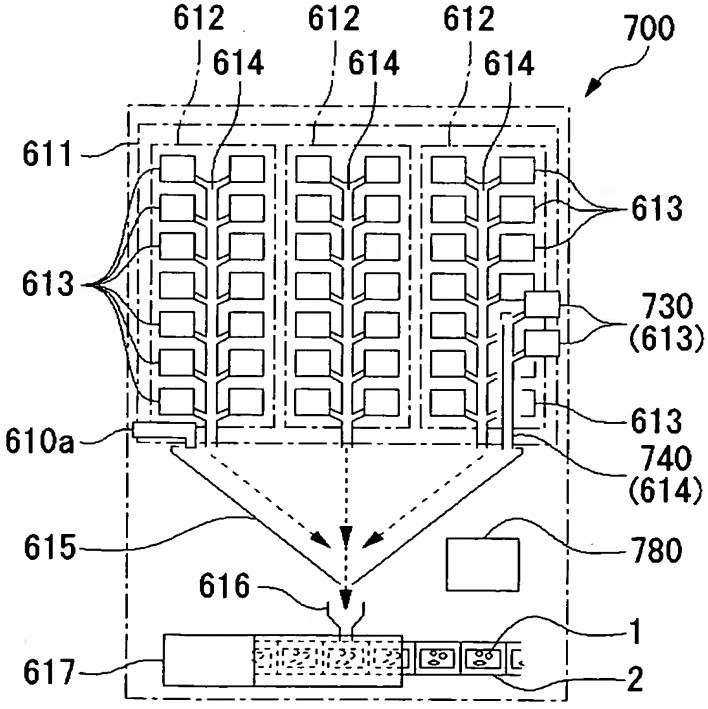

FIG.25A

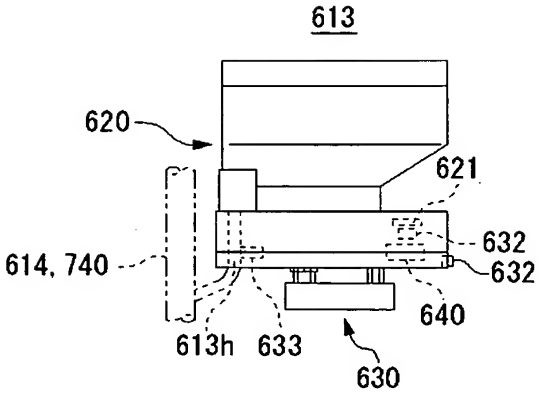

FIG.25B

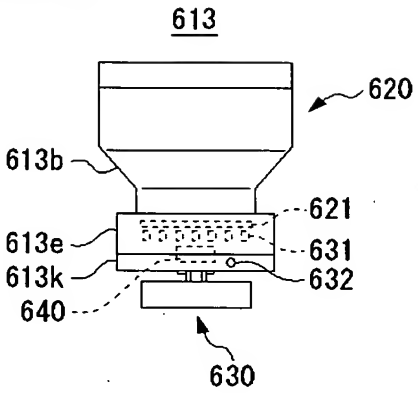

FIG.25C

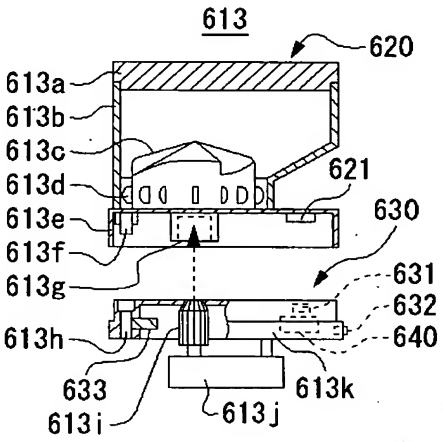

FIG.25D

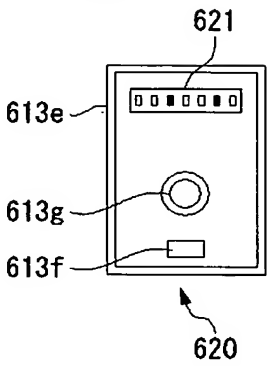

FIG.25E

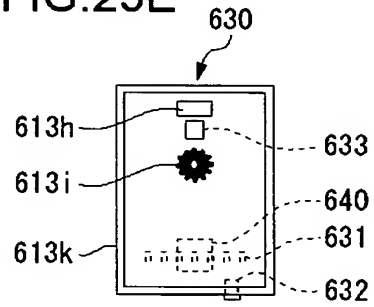

FIG.25F

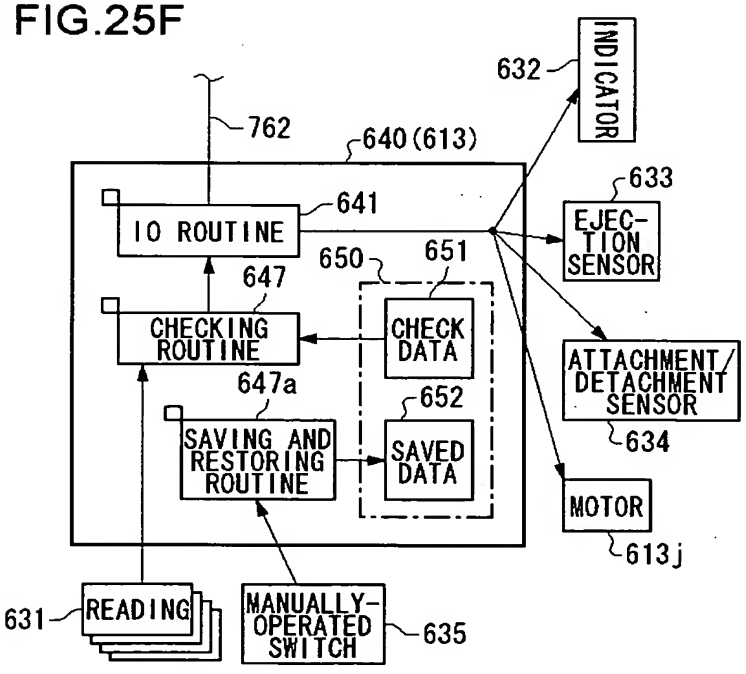

FIG.25G

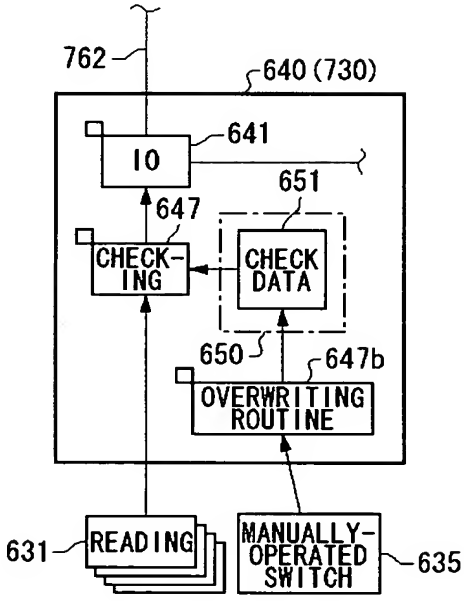

FIG.26

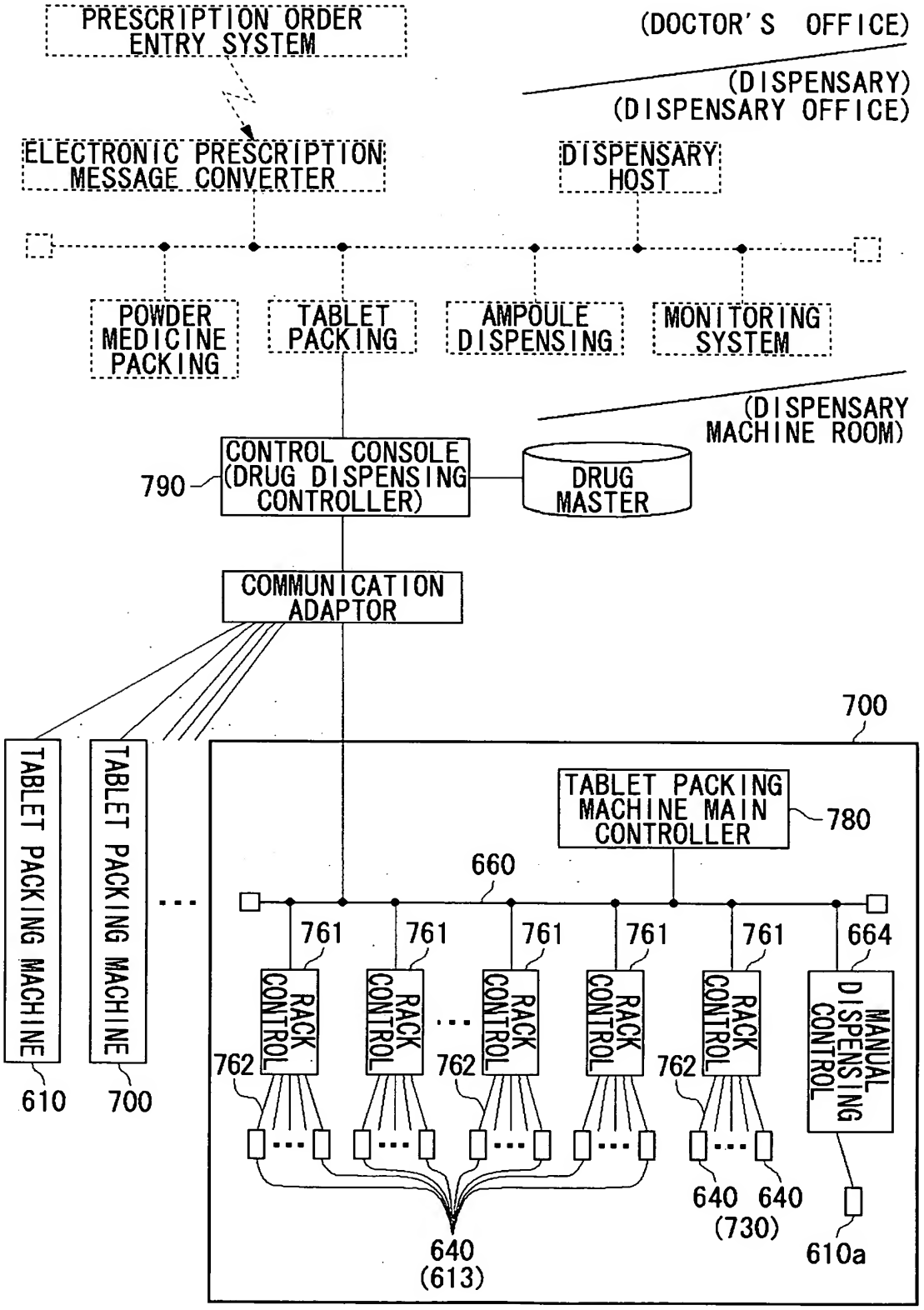
PRESCRIPTION ORDER ENTRY SYSTEM
(DOCTOR'S OFFICE)
(DISPENSARY)
(DISPENSARY OFFICE)
ELECTRONIC PRESCRIPTION MESSAGE CONVERTER
DISPENSARY HOST
POWDER MEDICINE PACKING
TABLET PACKING
AMPOULE DISPENSING
MONITORING SYSTEM
(DISPENSARY MACHINE ROOM)
790
CONTROL CONSOLE (DRUG DISPENSING CONTROLLER)
DRUG MASTER
COMMUNICATION ADAPTOR
700
TABLET PACKING MACHINE
TABLET PACKING MACHINE
TABLET PACKING MACHINE MAIN CONTROLLER
780
660
761
761
761
761
761
664
RACK CONTROL
RACK CONTROL
RACK CONTROL
RACK CONTROL
RACK CONTROL
MANUAL DISPENSING CONTROL
762
762
762
610
700
640 640
(730)
640
(613)
610a

FIG.27A

DRUG MASTER TABLE

DRUG CODE	DRUG INFORMATION					
		MACHINE 1 ID	CHECK DATA (CASSETTE IDENTIFICATION INFORMATION)	FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)	CASSETTE STATE	AC FLAG
			CHECK DATA (CASSETTE IDENTIFICATION INFORMATION)	FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)	CASSETTE STATE	AC FLAG
		⋮	⋮	⋮	⋮	⋮
		MACHINE N ID	CHECK DATA (CASSETTE IDENTIFICATION INFORMATION)	FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)	CASSETTE STATE	AC FLAG

FIG.27B

DRUG EJECTION INSTRUCTION (TO 613)

MACHINE n ID	FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)	TABLET COUNT ETC.	AC OFF

FIG.27C

DRUG EJECTION INSTRUCTION (TO 730)

MACHINE n ID	CHECK DATA (CASSETTE IDENTIFICATION INFORMATION)	TABLET COUNT ETC.	AC ON

FIG.28

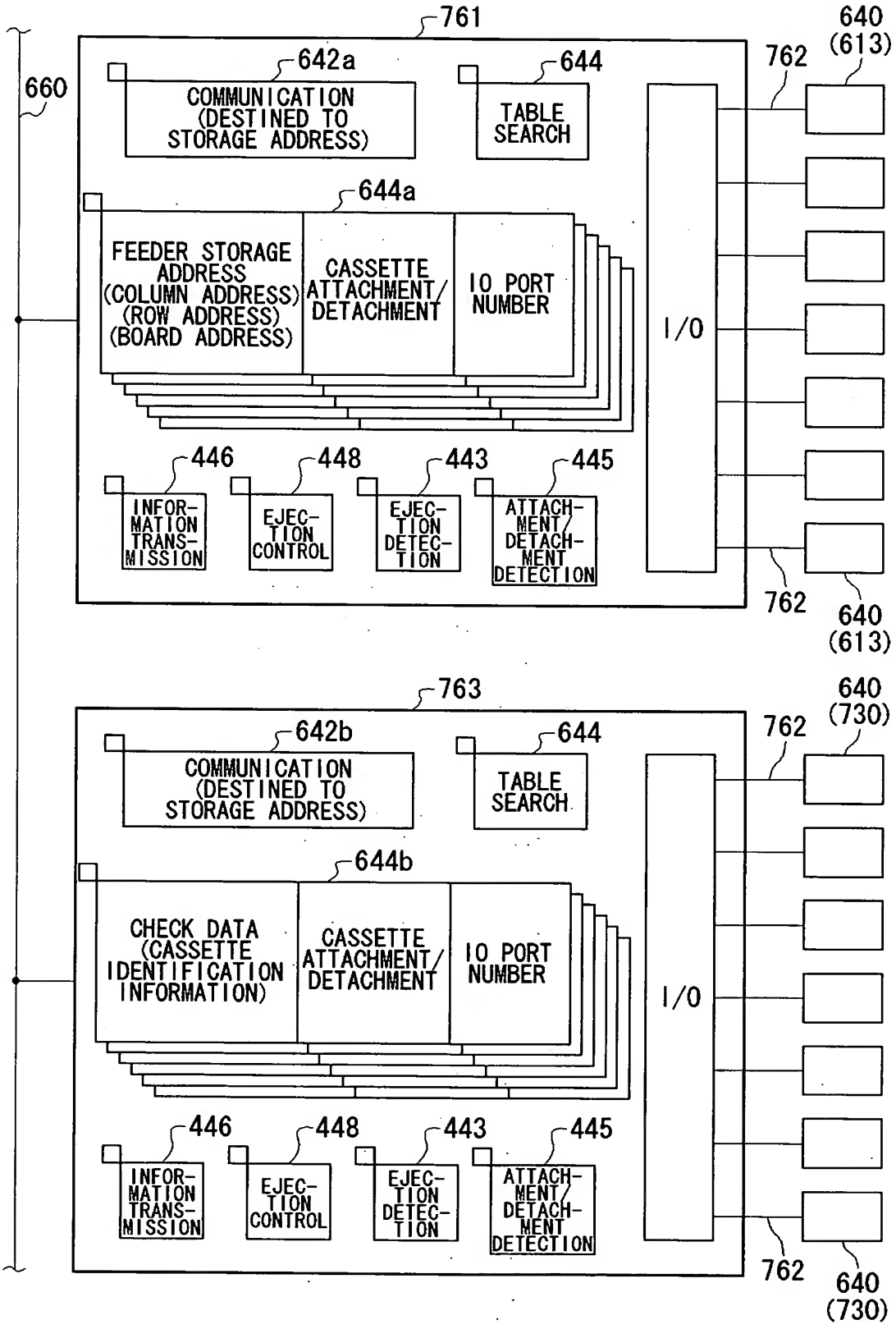
761
640
(613)
762
642a
COMMUNICATION (DESTINED TO STORAGE ADDRESS)
644
TABLE SEARCH
660
644a
FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)
CASSETTE ATTACHMENT/ DETACHMENT
IO PORT NUMBER
I/O
446
448
443
445
INFOR-MATION TRANS-MISSION
EJEC-TION CONTROL
EJEC-TION DETEC-TION
ATTACH-MENT/ DETACH-MENT DETECTION
762
640
(613)
763
640
(730)
762
642b
COMMUNICATION (DESTINED TO STORAGE ADDRESS)
644
TABLE SEARCH
644b
CHECK DATA (CASSETTE IDENTIFICATION INFORMATION)
CASSETTE ATTACHMENT/ DETACHMENT
IO PORT NUMBER
I/O
446
448
443
445
INFOR-MATION TRANS-MISSION
EJEC-TION CONTROL
EJEC-TION DETEC-TION
ATTACH-MENT/ DETACH-MENT DETECTION
762
640
(730)

FIG.29A

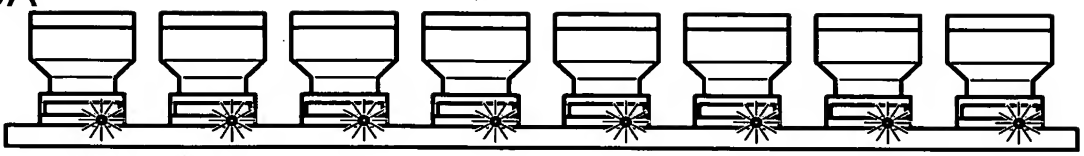

FIG.29B

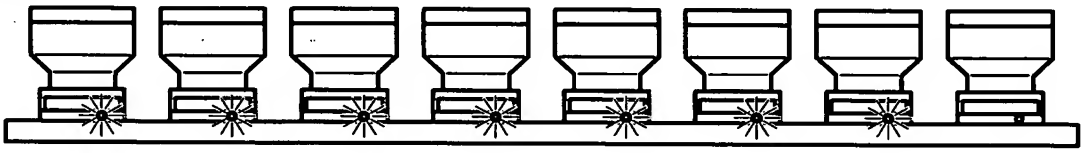

FIG.29C

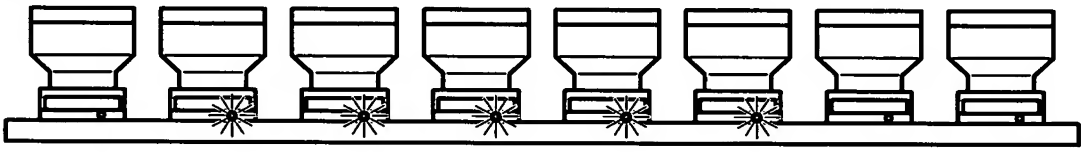

FIG.29D

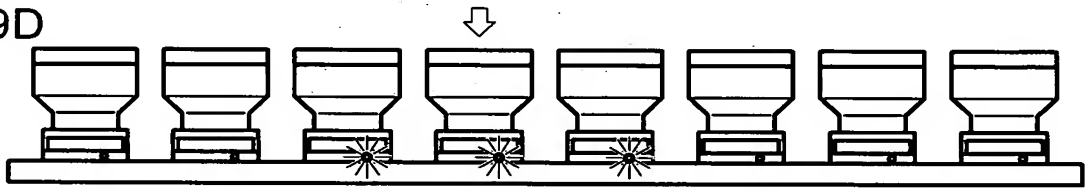

FIG.29E

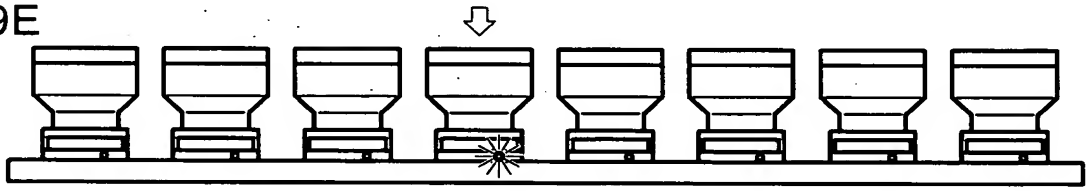

FIG.29F

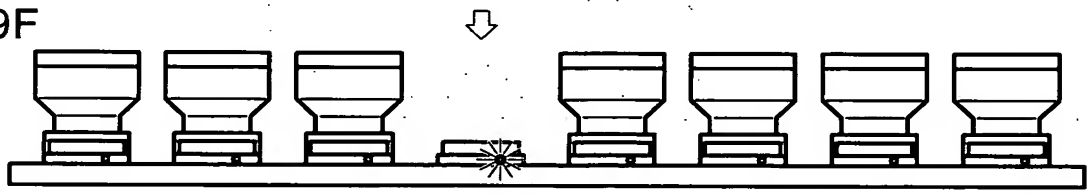

FIG.29G

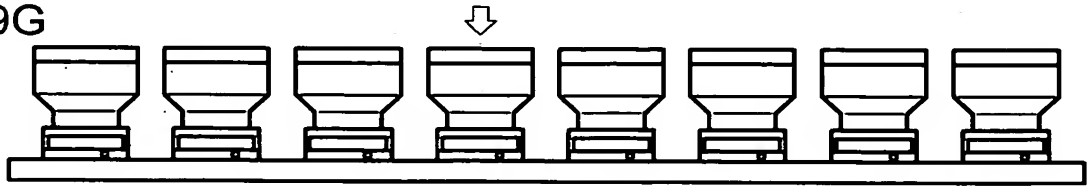

FIG.30

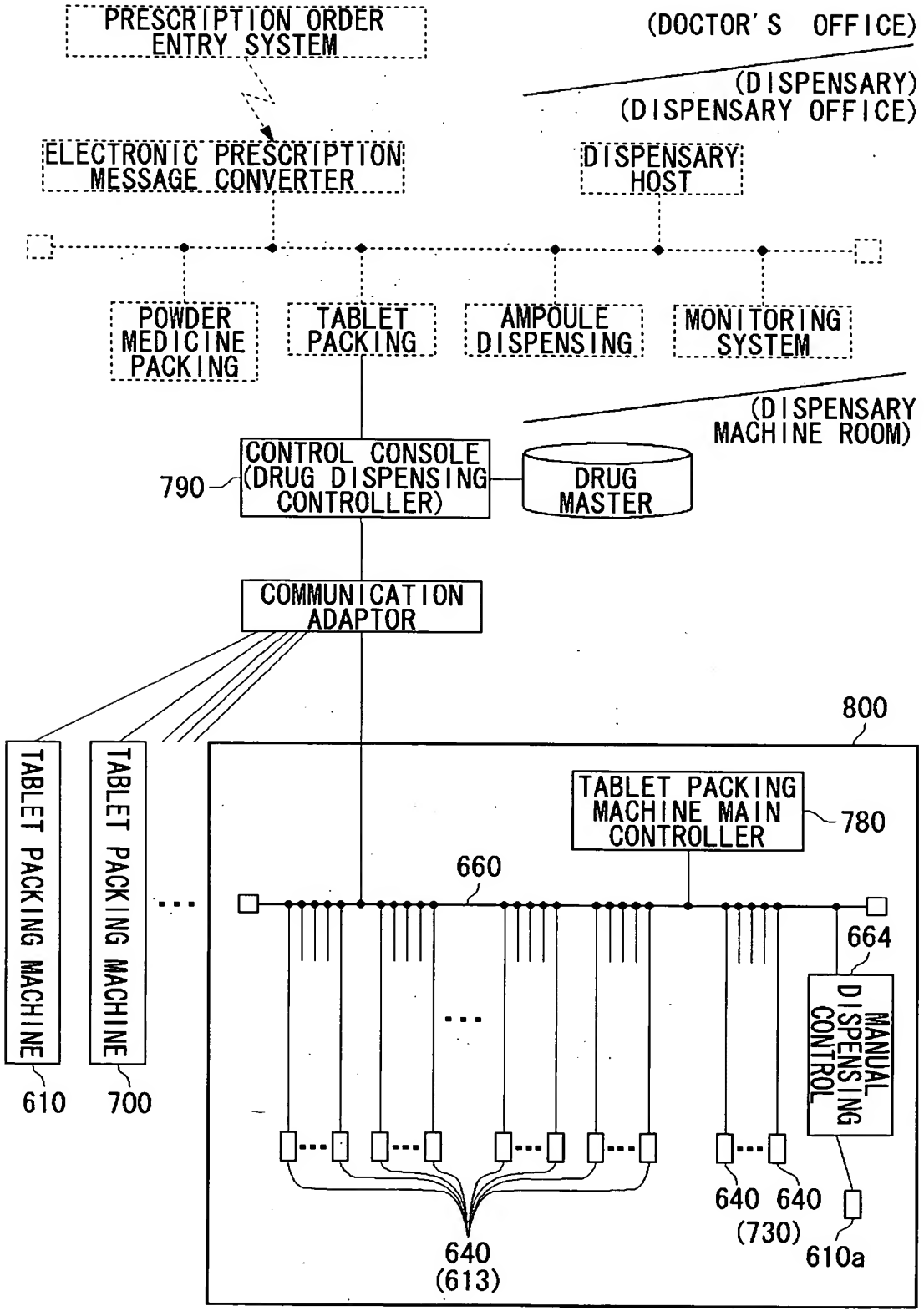
PRESCRIPTION ORDER ENTRY SYSTEM
(DOCTOR'S OFFICE)
(DISPENSARY)
(DISPENSARY OFFICE)
ELECTRONIC PRESCRIPTION MESSAGE CONVERTER
DISPENSARY HOST
POWDER MEDICINE PACKING
TABLET PACKING
AMPOULE DISPENSING
MONITORING SYSTEM
(DISPENSARY MACHINE ROOM)
790
CONTROL CONSOLE (DRUG DISPENSING CONTROLLER)
DRUG MASTER
COMMUNICATION ADAPTOR
800
TABLET PACKING MACHINE
TABLET PACKING MACHINE
610
700
TABLET PACKING MACHINE MAIN CONTROLLER
780
660
664
MANUAL DISPENSING CONTROL
640
(613)
640
640
(730)
610a

FIG.31A

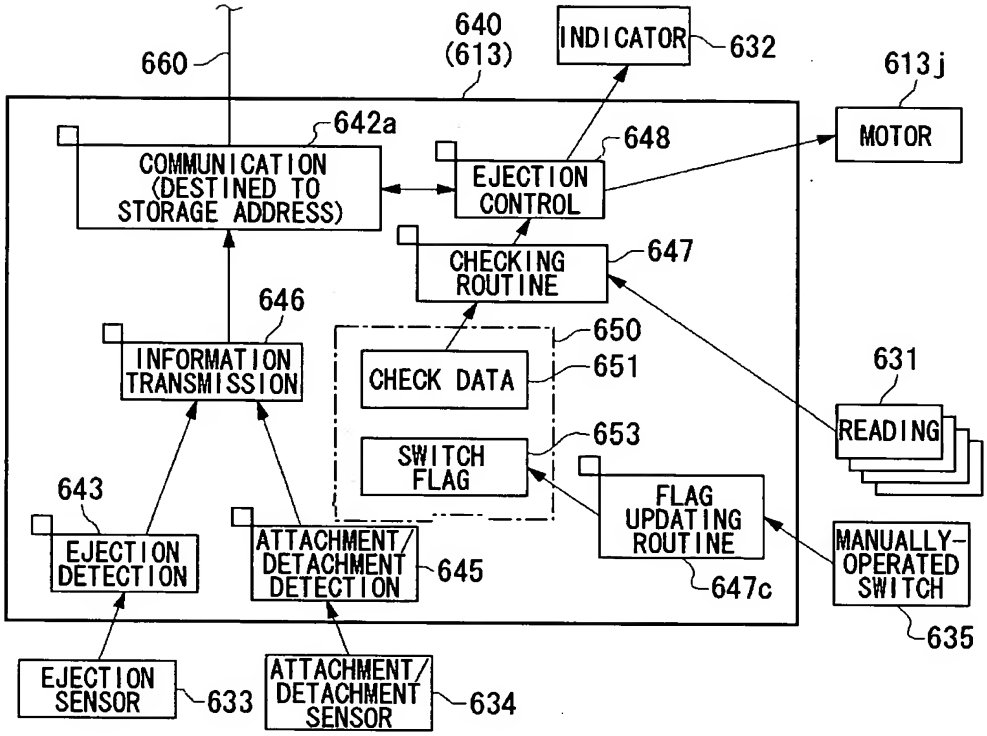

FIG.31B

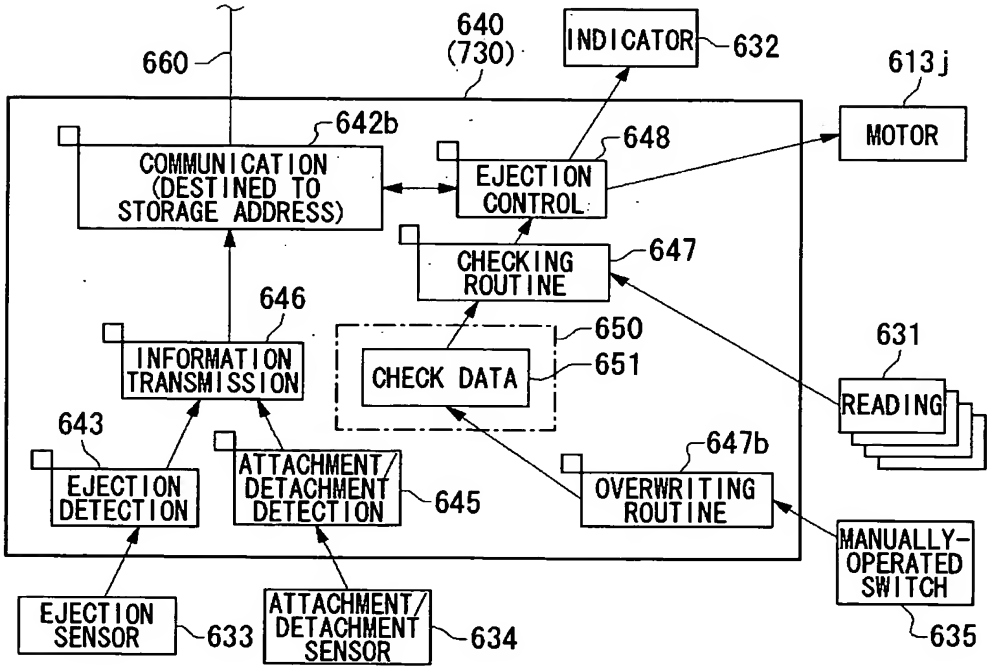

FIG.32A

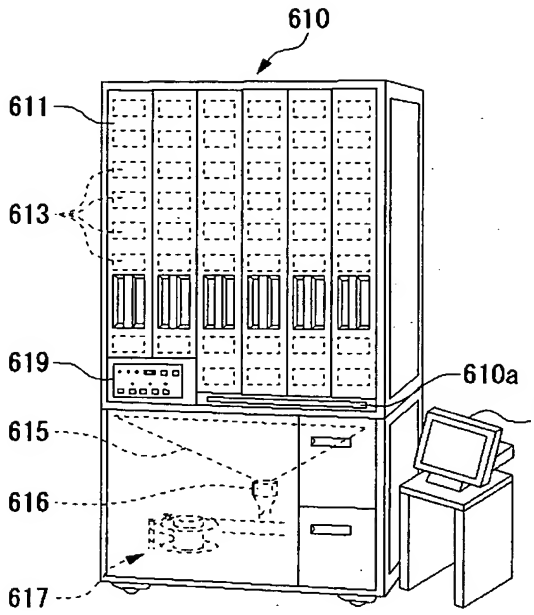

FIG.32B

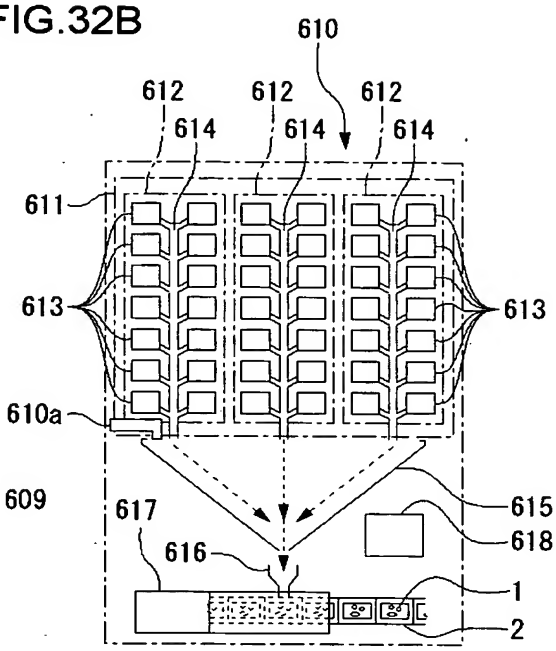

FIG.32C

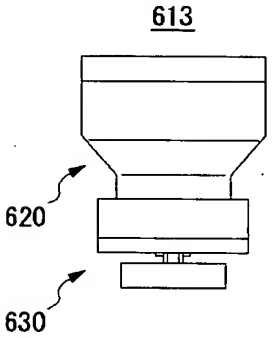

FIG.32D

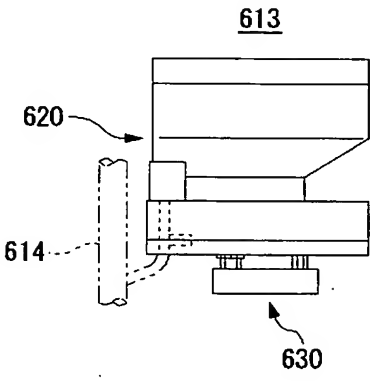

FIG.32E

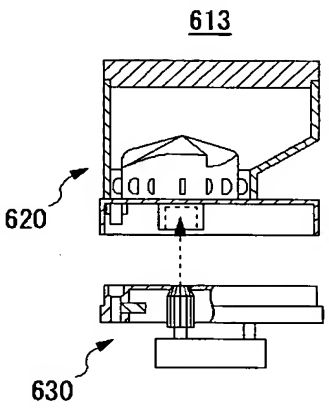

FIG.32F

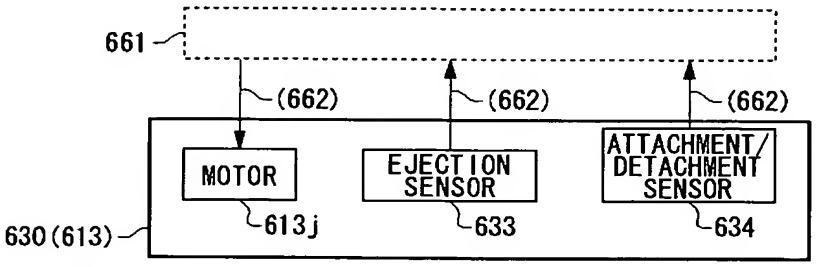

FIG.33

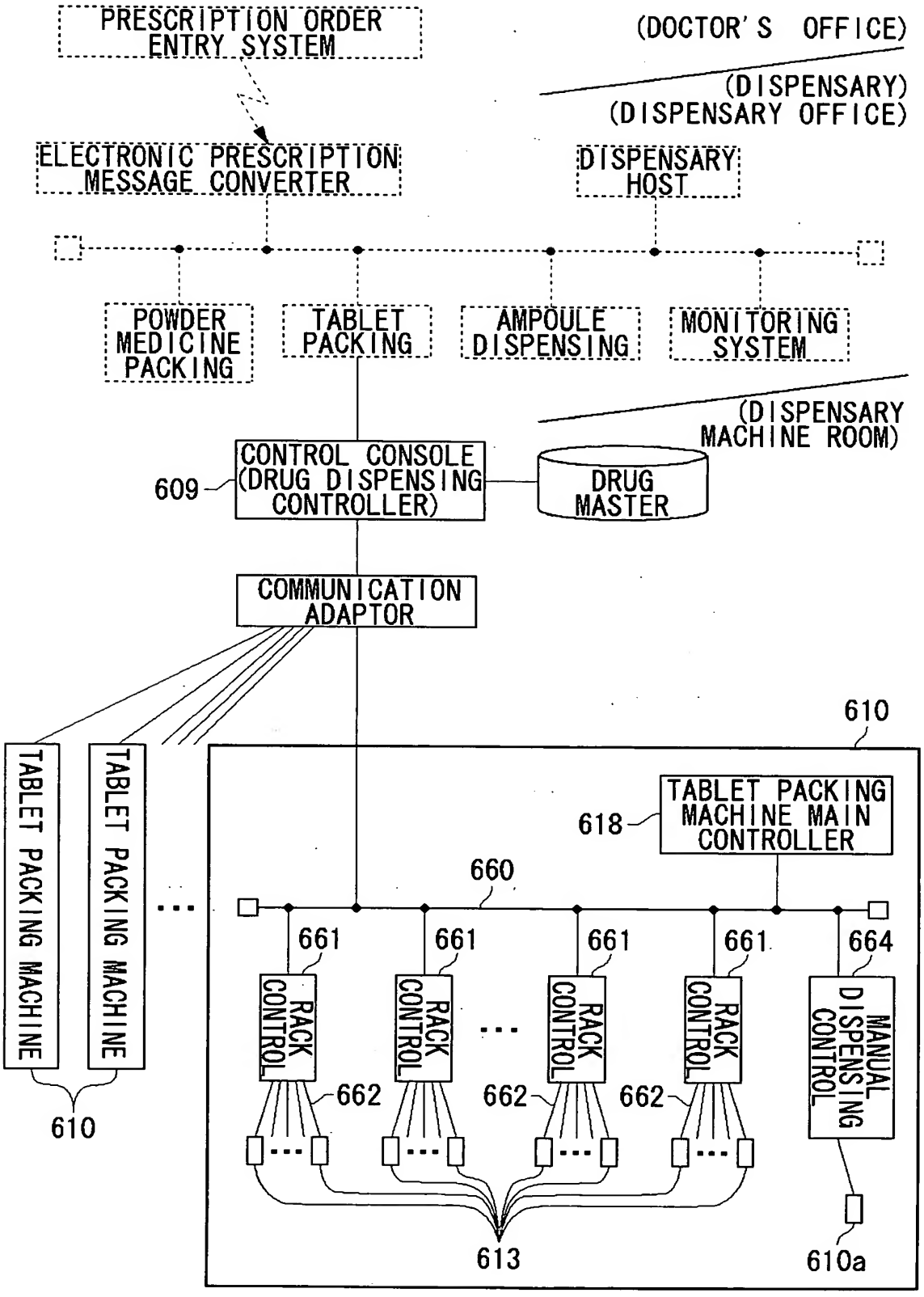
PRESCRIPTION ORDER ENTRY SYSTEM
(DOCTOR'S OFFICE)
(DISPENSARY)
(DISPENSARY OFFICE)
ELECTRONIC PRESCRIPTION MESSAGE CONVERTER
DISPENSARY HOST
POWDER MEDICINE PACKING
TABLET PACKING
AMPOULE DISPENSING
MONITORING SYSTEM
(DISPENSARY MACHINE ROOM)
609
CONTROL CONSOLE (DRUG DISPENSING CONTROLLER)
DRUG MASTER
COMMUNICATION ADAPTOR
610
TABLET PACKING MACHINE
TABLET PACKING MACHINE
610
618
TABLET PACKING MACHINE MAIN CONTROLLER
660
661
661
661
661
664
RACK CONTROL
RACK CONTROL
RACK CONTROL
RACK CONTROL
MANUAL DISPENSING CONTROL
662
662
662
613
610a

FIG.34A

DRUG MASTER TABLE

DRUG CODE	DRUG INFORMATION					
		MACHINE 1 ID	CHECK DATA (CASSETTE IDENTIFICATION INFORMATION)	FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)	CASSETTE STATE	
			CHECK DATA (CASSETTE IDENTIFICATION INFORMATION)	FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)	CASSETTE STATE	
		⋮	⋮	⋮	⋮	⋮
		MACHINE N ID	CHECK DATA (CASSETTE IDENTIFICATION INFORMATION)	FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)	CASSETTE STATE	

(FREE AREA FOR FUTURE EXPANSION)

FIG.34B

DRUG EJECTION INSTRUCTION

MACHINE n ID	FEEDER STORAGE ADDRESS (COLUMN ADDRESS) (ROW ADDRESS) (BOARD ADDRESS)	TABLET COUNT ETC.

FIG.35A

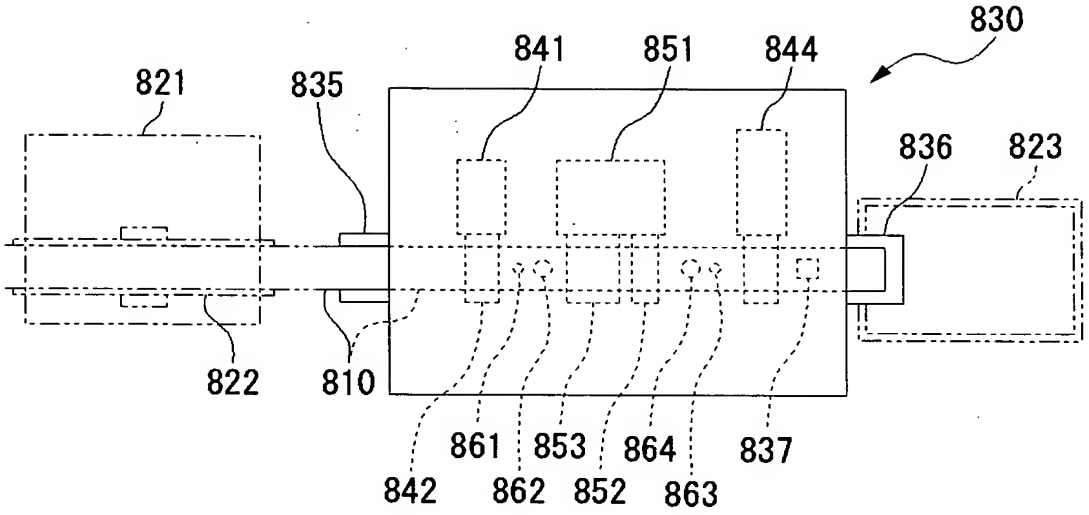

FIG.35B

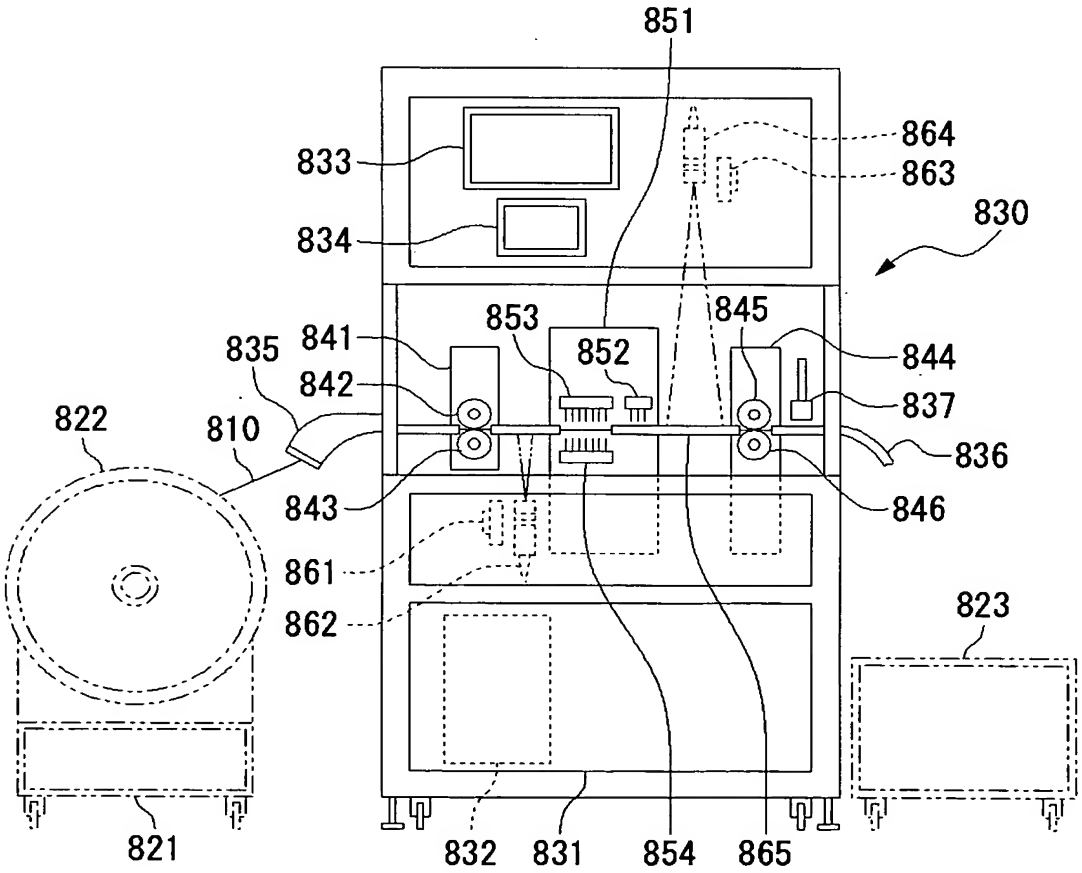

FIG.36A

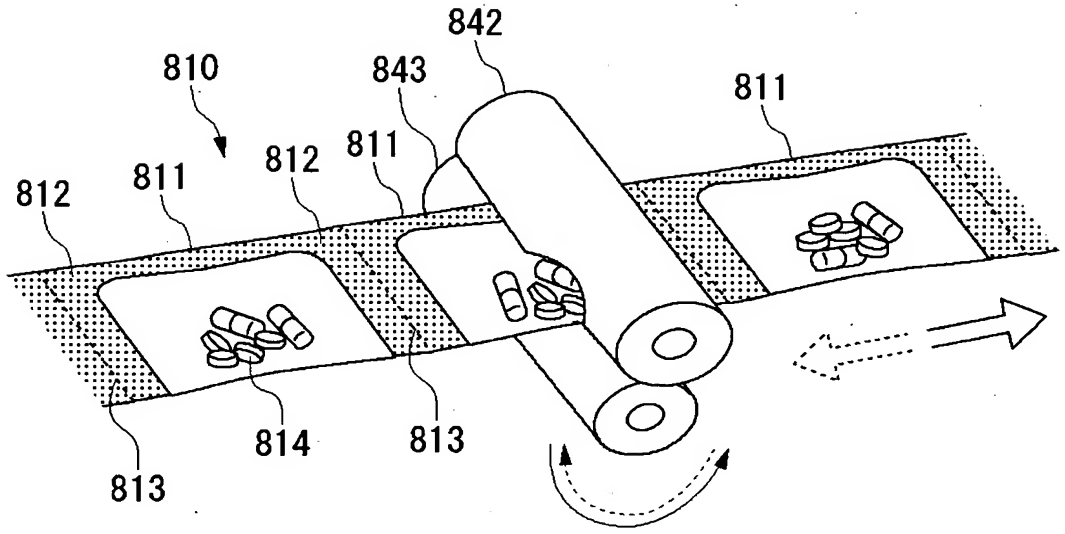

FIG.36B

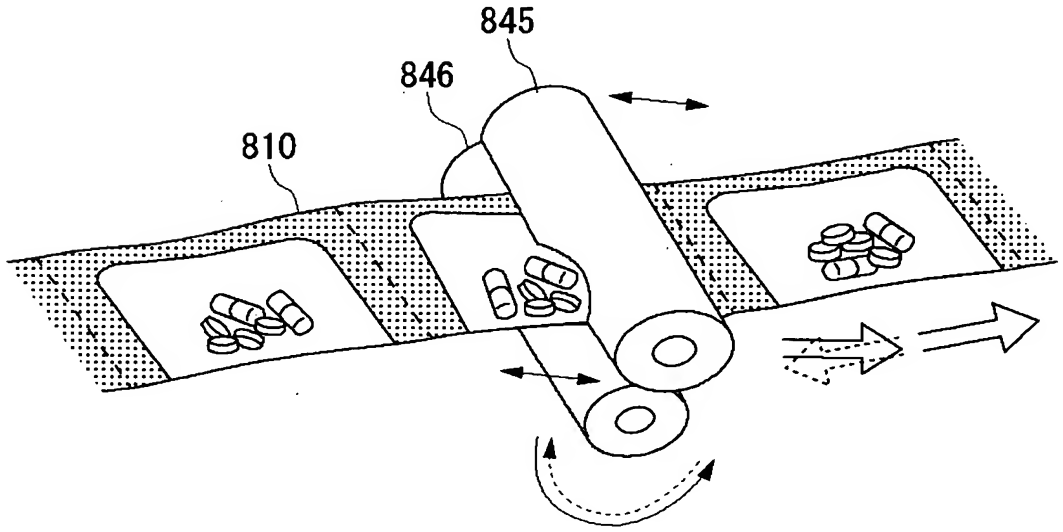

FIG.37

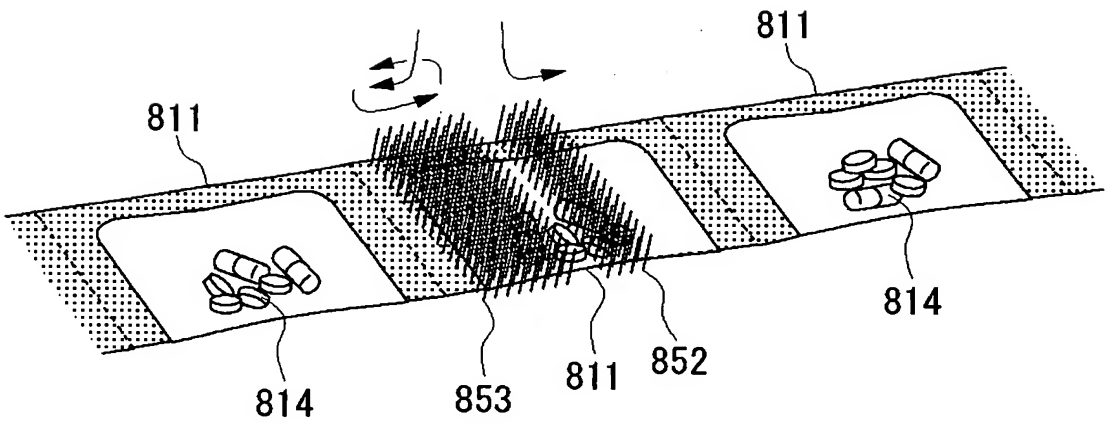

FIG.38

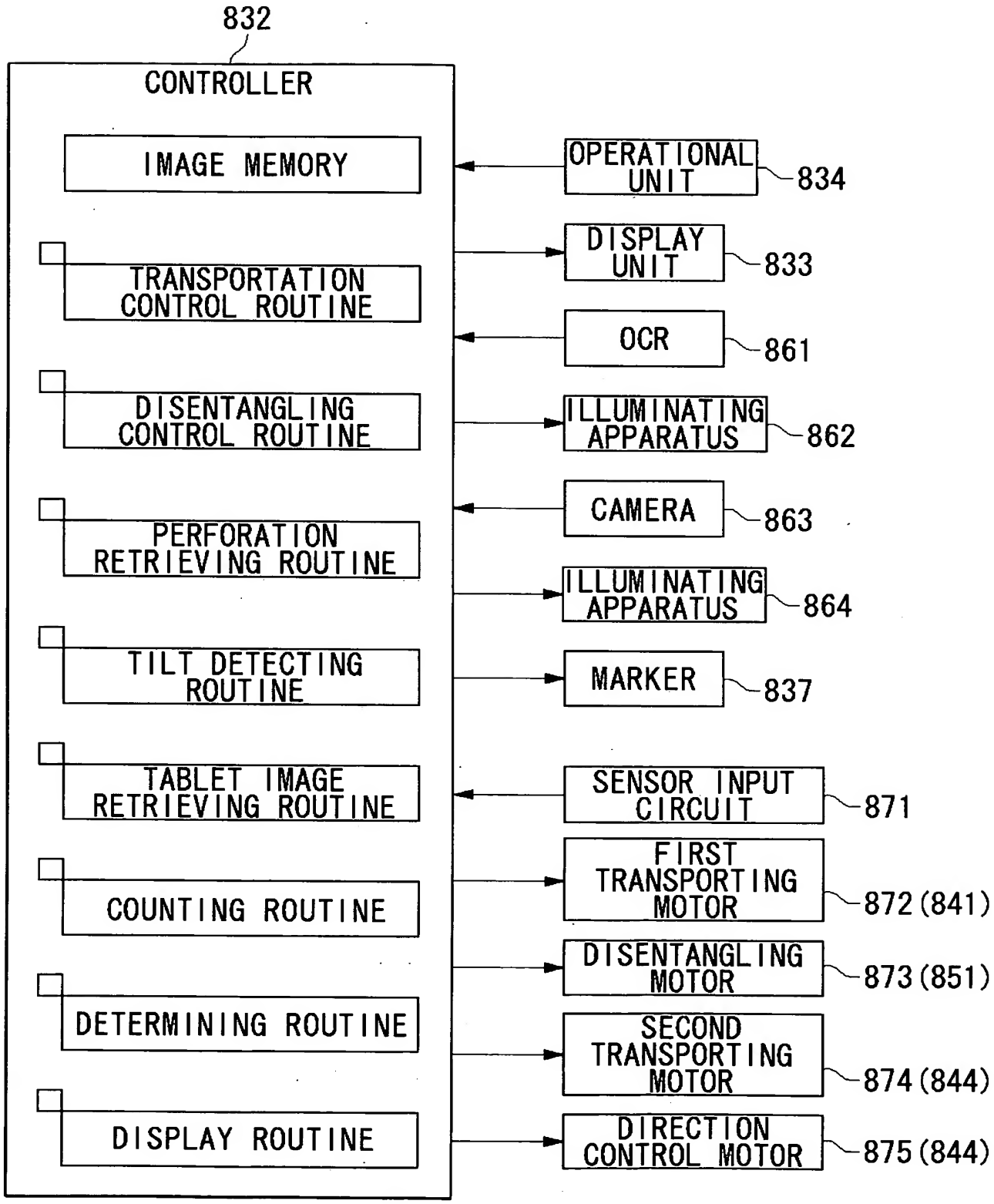
832
CONTROLLER
IMAGE MEMORY
TRANSPORTATION CONTROL ROUTINE
DISENTANGLING CONTROL ROUTINE
PERFORATION RETRIEVING ROUTINE
TILT DETECTING ROUTINE
TABLET IMAGE RETRIEVING ROUTINE
COUNTING ROUTINE
DETERMINING ROUTINE
DISPLAY ROUTINE
OPERATIONAL UNIT
834
DISPLAY UNIT
833
OCR
861
ILLUMINATING APPARATUS
862
CAMERA
863
ILLUMINATING APPARATUS
864
MARKER
837
SENSOR INPUT CIRCUIT
871
FIRST TRANSPORTING MOTOR
872(841)
DISENTANGLING MOTOR
873(851)
SECOND TRANSPORTING MOTOR
874(844)
DIRECTION CONTROL MOTOR
875(844)

FIG.39A

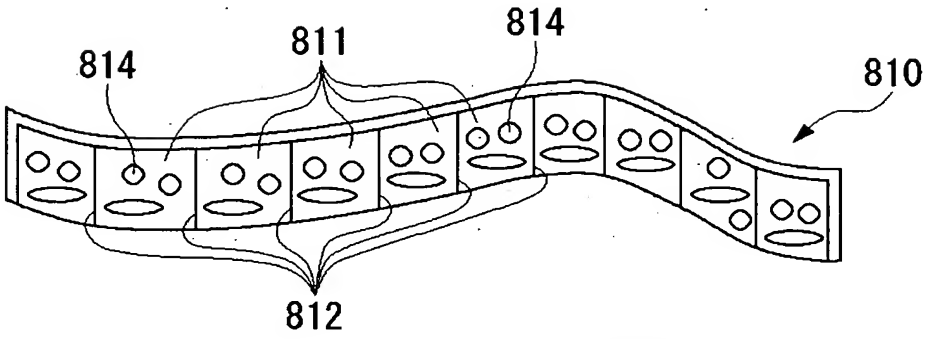

FIG.39B

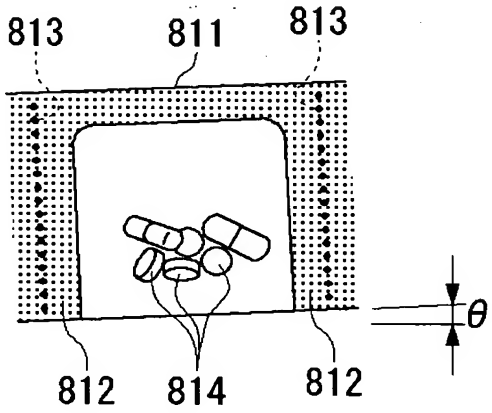

FIG.39C

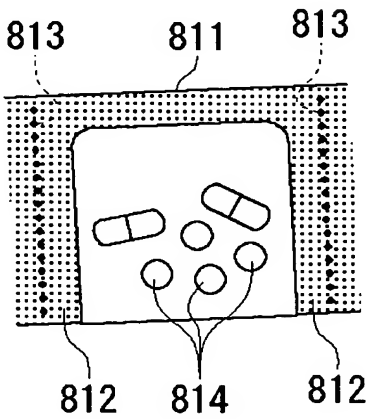

FIG.39D

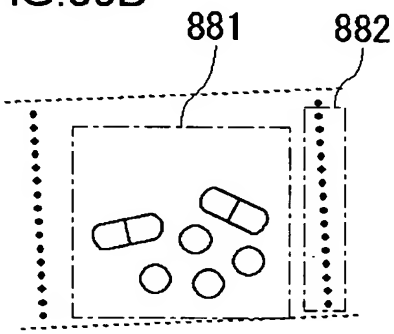

FIG.39E

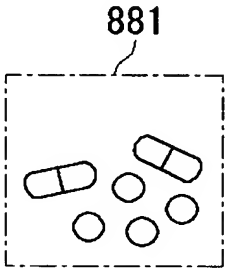

FIG.39F

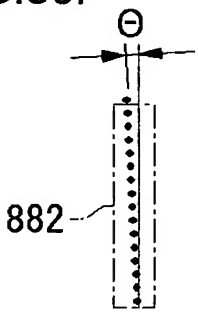

FIG.39G

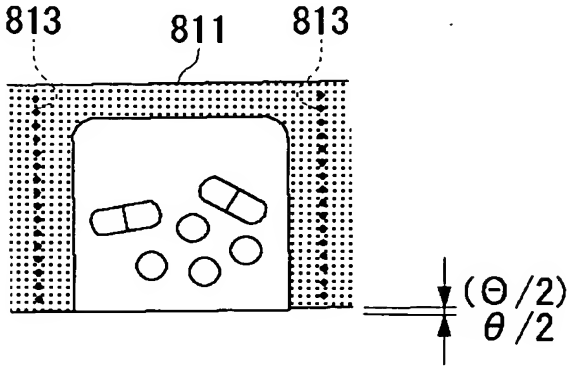

FIG.39H

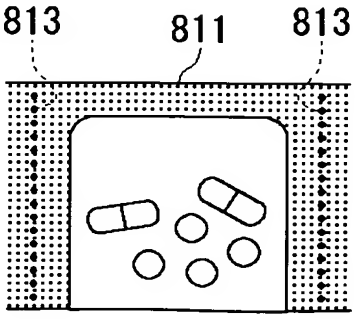

FIG.40A

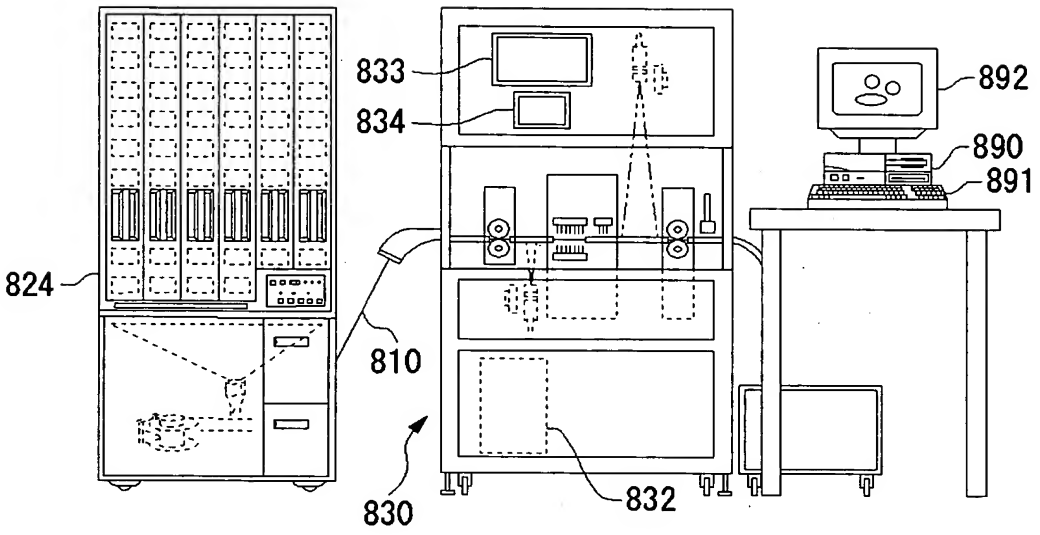
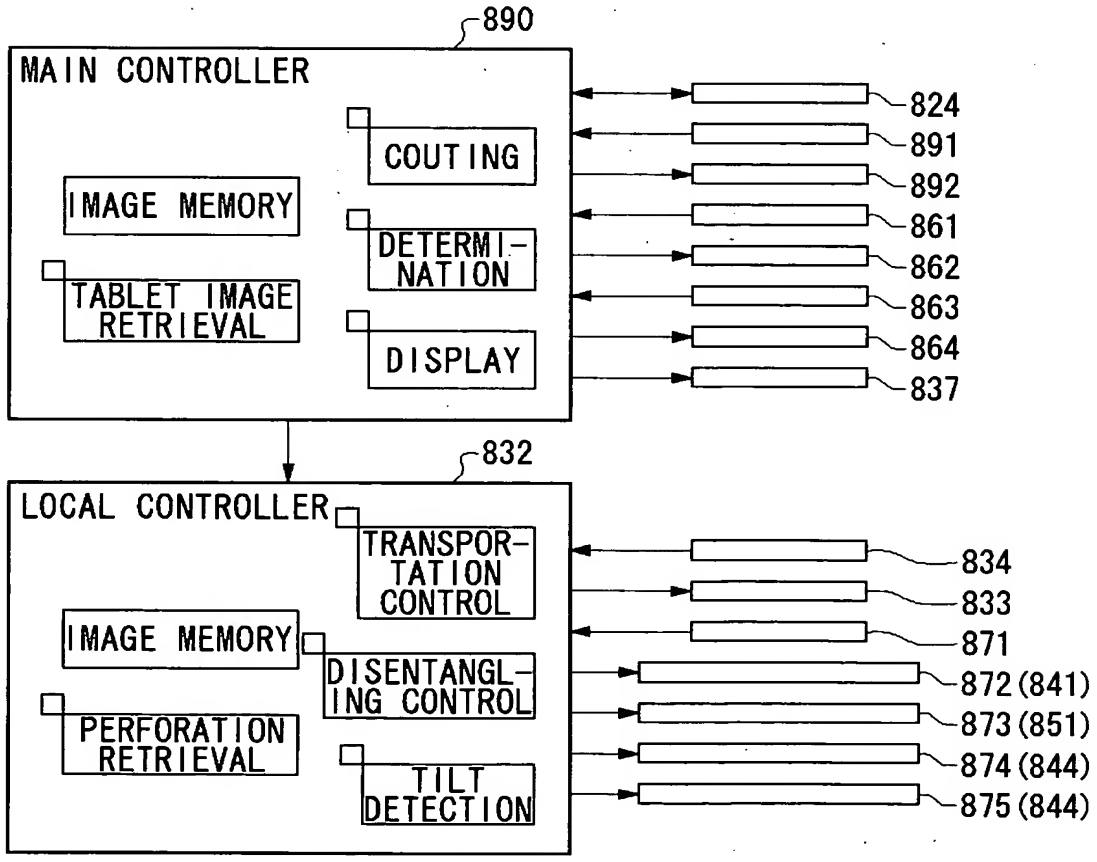
FIG.40B